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ABSTRACT

This document presents papers prepared for a conference of higher education researchers, policy analysts, practitioners, and administrators. The conference centered around whether a new, broader conceptualization of access to postsecondary education is required, and what such an expanded definition of access would mean in terms of policy, research, and data collection. The first paper, a synthesis of the discussion, is "Reconceptualizing Access: A Review of the Findings from the NPEC/ACE Policy Panel on Access and Its Data Systems Ramifications" (Sandra S. Ruppert). Five experts were commissioned to prepare the following papers: (1) "Access to Higher Education" (Zelema M. Harris); (2) "Assessing the Impact of Public Policies on Access to Postsecondary Education" (Arthur M. Hauptman); (3) "Research Questions and Data Resource Needs for Examining Student Access to Higher Education" (Michael T. Nettles, Laura W. Perna, and Catherine M. Millett); (4) "Access in a Democracy: Narrowing the Opportunity Gap" (Laura I. Rendon); and (5) "From Access to Participation" (Vincent Tinto). The final paper, by Sylvia Hurtado and Karen Kurotsuchi Inkelas, is an overview of bibliographic resources and is titled "New Dilemmas of Access and Implications for National Data Use/Availability: A Summary and Annotated

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Bibliography of Sources." Appended is a list of panel participants.
(Individual papers contain references.) (DB)

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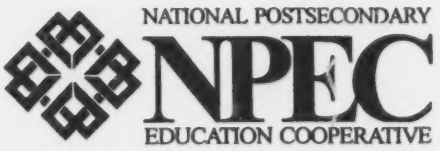
Reconceptualizing Access in Postsecondary Education and Its Ramifications for Data Systems

Report of the Policy Panel on Access



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Reconceptualizing Access in Postsecondary Education and Its Ramifications for Data Systems

Report of the Policy Panel on Access

Co-Sponsored by
The National Postsecondary Education Cooperative
and
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Washington, D.C.
Policy Panel Meeting
September 9, 1997

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PREFACE

The way in which postsecondary education defines access shapes other crucial policy areas, such as student financial aid. Questions are constantly raised about what access means. For example, if a student matriculates and then drops out, is that access? If a student is not able to enroll in his or her first choice institution, but is able to enroll in another institution, is that access? Should current access definitions be modified or expanded? Has postsecondary education limited its vision for access by focusing on available data to the exclusion of data that should be collected?

At the National Postsecondary Education Cooperative's (NPEC) November 1996 Council meeting, Council members questioned whether current access definitions should be modified or expanded and whether, to some extent, postsecondary education has limited its vision for access by focusing on available data to the exclusion of what data should be collected. Other participants questioned whether or not postsecondary education could reach consensus on defining access. The Council members recommended that NPEC initiate a project to (1) establish consensus and clarify access and policy linkages with a particular emphasis on broadening access definitions to include retention, satisfaction, and goal attainment, and (2) recommend new data collection efforts or analytical studies or changes to current efforts that reflect a broader view of access.

On September 9, 1997, approximately 50 higher education researchers, policy analysts, practitioners, and administrators participated in a Policy Panel on Access and Its Data Ramifications. Co-sponsored by NPEC and the American Council on Education, the Panel's purpose was to seek perspectives of all participants on:

- Whether a new, broader conceptualization of access is required to inform policy, and
- What an expanded definition of access would mean in terms of policy, research, and data collection.

The discussion was structured to focus on various domains of access including financial, personal, preparation, geographic, cultural, performance, goals, and involvement. Cheryl Blanco, Chair of the NPEC Subcommittee on the Policy Panel on Access, served as Panel moderator. Expert panelists included Zelema Harris, Arthur Hauptman, Michael Nettles, Laura Rendón, and Vincent Tinto. Each panelist was commissioned to write a paper presenting his or her perspectives prior to the Panel meeting. Sandra Ruppert was commissioned to write a synthesis of the Panel discussion. Sylvia Hurtado and

Karen Inkelas prepared an overview of bibliographic resources on access and its data implications. All of the expert papers are contained in this report. Participants in the Policy Panel are listed in the Appendix.

The views of participants at the Panel may be summarized as:

1. Current conceptualization, definitions, and policies do not adequately link goals for increasing college entry with educational outcomes or process, and current data collection does not adequately describe and explain either the process or the outcomes for students in postsecondary education.

2. Consideration should be given to reconceiving access to link enrollment with outcomes and to encompass the process by which those outcomes are achieved (e.g., the set of conditions both prior to and following a student's entry or reentry into postsecondary education).

3. Some traditional assumptions about what access means are useful for policy development; however, postsecondary education should expand its understanding of what access means to include multiple entry points and elementary and secondary education.

4. The term access may not need to be redefined, but the study of the concept of access should be broadened to include multiple entry po , college choice, opportunity to succeed, outcomes, and processes.

NPEC is continuing its exploration of access and related issues. Additional work is now underway to further define access and to initiate research that will be beneficial for policy makers. We welcome your suggestions and invite you to comment on this report by contacting the NPEC project office at the National Center for Education Statistics, U.S. Department of Education, 555 New Jersey Avenue, NW, Room 311, Washington, DC 20208, telephone (202) 219-1590. Your comments and suggestions are valuable contributions to NPEC's overall effort.

RECONCEPTUALIZING ACCESS

A Review of the Findings from the NPEC/ACE Policy Panel on Access and Its Data Systems Ramifications

Sandra S. Ruppert
Educational Systems Research

Introduction

On the surface, America's public policy commitment to provide access to any individual who seeks a postsecondary education seems to be working. Our nation's system of higher education enjoys the highest participation rates in the world. More than 14 million students are enrolled currently in U.S. public and private two-year and four-year colleges and universities. And, as recent studies show, there are definite signs of improvement overall: In the last ten years, college enrollments have grown by more than 16 percent; the share of recent high school graduates who go on to college has increased from 57 to 62 percent; and the "access gap" for the groups historically underrepresented in higher education has closed dramatically as greater numbers of women, minorities, and economically disadvantaged students have enrolled in college.

But scratch beneath the surface, and the news about access and opportunity in American higher education is certainly more complex and a lot less hopeful.

For the far too many students who fail to complete their college education, higher education's "open door" has become little more than a revolving door. According to American College Testing (ACT), three of every 10 students enrolled in a public college in Fall 1994 did not return to the same institution the following year. For other students the door to a postsecondary education is only partially open because financial constraints or lack of preparation has limited their college choices. This is no small matter when it leads to a form of "educational segregation" — the differential clustering of students in institutions by race, gender, or socio-economic status. And with recent challenges to long-standing affirmative action policies, which allow such factors as race, gender, or ethnicity to be considered in the admissions process, doors leading to certain higher education institutions threaten to close altogether for some students.

Who gets to go to college, students' choices in which college to attend, and the likelihood they will successfully complete their college education all depend to a large extent on how public policies for access are designed, implemented, and evaluated. And it is against this current backdrop that the Steering Committee of the National Postsecondary Education Cooperative (NPEC) identified "access and opportunity" at its January 1997 meeting as one of six project priorities that warrant further attention. NPEC was established by congressional authority in 1994 to assist the National Center for Education Statistics (NCES) in identifying "on-going and emerging issues germane to postsecondary education" and promoting "the quality, comparability, and utility of postsecondary data and information that support policy development, implementation and evaluation."

To assist NPEC in exploring the policy and data collection issues related to postsecondary educational access and opportunity, the American Council on Education (ACE) joined with NPEC in sponsoring the **Policy Panel on Access and Its Data Systems Ramifications**, held on September 9, 1997 in Washington D.C. Approximately 50 higher education researchers, policy analysts, practitioners, and administrators representing various state and federal agencies, higher education associations, and postsecondary institutions attended the day-long invitational meeting. The meeting was structured largely around various dimensions of access as described by Zelema M. Harris, president of Parkland College in Champaign, Illinois and chair of the Illinois Community College System's Access and Opportunities Committee.

The discussion focused on three major topics: (1) What does "access" mean? Are current common definitions adequate? (2) If "access" is reconceptualized, what are the new components? and (3) What would a different conceptualization of access mean in terms of policy setting and data collection at the local, state, and national levels? Findings from the meeting are intended to play a major role in shaping the nature and extent of NPEC's continuing efforts in this area.

The meeting's outcome left little doubt about the significance of the matter: Participants expressed strong support for NPEC's concerns and interest in tackling the topic of "reconceptualizing access." They concluded that, as reflected in public policy, current definitions of access fail to adequately link goals for increasing college entry with educational outcomes, most notably high student achievement and personal goal attainment. Our understandings of what "access" means — and hence, our approach to policy setting and data collection — must be broadened to become more inclusive of students' experiences both leading up to and following its current interpretation as the "initial point of entry." And NPEC, in collaboration with other higher education organizations and entities, can play a central role in both shaping and informing public policy commitments to access by ensuring that policy development, implementation, and evaluation are closely aligned with data collection efforts.

This report examines in more depth these findings and other conclusions drawn from the NPEC/ACE Access Policy Panel. The primary reference for this report is the considerable insights and expertise offered by participants who attended the meeting. The report's foremost objective is to provide a foundation for NPEC's consideration of next steps. Another objective is to stimulate further discussion about the issues raised in the report. Because the report is intended to be a review of the meeting's findings rather than a description of its proceedings, the content is supplemented in places with the author's own interpretations and with information drawn from other sources.

The report also draws liberally from written materials prepared specifically for the meeting and which were provided to participants in advance. Prior to the NPEC/ACE Access Policy Panel, NPEC commissioned six papers: an overview of relevant bibliographic resources on access and its data implications prepared by Sylvia Hurtado and Karen Kurotsuchi Inkelas and a set of five topical background papers. Each of the five background papers was prepared by a different author who brought unique perspectives and expertise to bear in responding to the agenda topics. The principal authors – Michael Nettles, Laura Rendón, Zelema Harris, Arthur Hauptman, and Vincent Tinto – gave presentations, as did Sylvia Hurtado and Karen Inkelas, and the Panel served as the springboard for much of the dialogue and discussion that followed.

The remainder of this paper is organized into three sections, each with implications for policy setting and data collection. **Section I**, *The Policy Context for Evaluating Access*, examines the context for evaluating access policies and what the data reveal about their effectiveness. **Section II**,

Access Reconceptualized, explores why current definitions of access are inadequate and describes the components of a reconceptualized approach. **Section III**, *Meeting the Challenges Ahead*, offers a look ahead to the challenges and some specific recommendations for NPEC's consideration of next steps.

Section I: The Policy Context for Evaluating Access

What are the policy goals and public expectations for postsecondary access? What do the data reveal about the effectiveness of current access approaches in meeting citizens' increasing need and demand for postsecondary education? Meeting participants' discussion frequently returned to these two underlying questions as they evaluated the adequacy of current definitions of access. From their discussion, it was clear that the answers are neither obvious nor complete.

While acknowledging that prodigious amounts of local, state, and national level data already exist for many access-related issues, participants generally agreed there remain significant gaps in the kinds of information collected. There are also enough inconsistencies in data collection methods that it is often difficult to conduct comparative analyses. Over the years, shifting public policy priorities and the lack of specific policy goals and objectives for increasing access have compounded the problem. As Michael Nettles and his co-authors point out in their paper, "Student access to higher education has multiple meanings and little attention has been given to constructing adequate measures for assessing the quality and efficiency of the programs and policies that are instituted to achieve greater access."

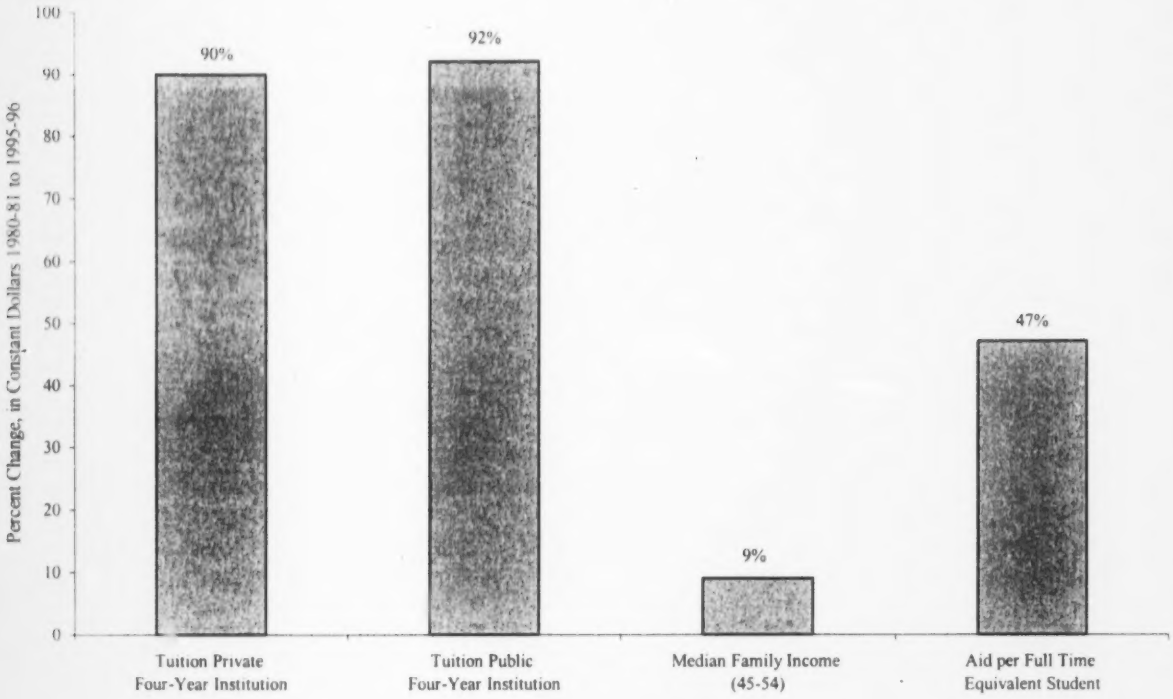
During the meeting, discussants often referred to access in terms of its different policy purposes, such as financial access or academic access. Examining how public policies have evolved to include various purposes that were "layered on" over time to existing policies helps in explaining the term's multiple meanings. This process also provides a context for evaluating the effectiveness of the policies themselves. In tracing the evolution of access policy from 1965 to 1990, Judith Eaton outlines five successive stages, each framed in terms of the barriers to access that public policy was aimed at ameliorating — either financial, academic, racial and gender, choice, or motivational barriers.[1] In the period since 1990 a new barrier has emerged as access to technology resources has become an increasingly important policy concern.

Following are brief descriptions of the barriers to access and highlights from participants' discussion about the effectiveness of policy approaches relative to each one:

1. **Financial barriers to access.** The primary goal of access policies following World War II was to help returning veterans overcome financial barriers to college attendance. Fifteen-year changes in tuition, family income, and student aid indicate how tuitions have increased.

   With passage of the Higher Education Act of 1965, the principle of financial assistance was extended to the general population. Financial aid programs authorized under Title IV of the Act are the primary vehicle through which the federal government attempts to expand student access to college. Federal programs, by far, constitute the largest single source of student financial aid: According to data compiled by the College Board, nearly three-quarters of all aid awarded to students from all sources for the academic year 1995-1996 stem from federal programs which

Fifteen-Year Changes in Tuition, Family Income, and Student Aid (Inflation-Adjusted)



Source: Trends in Student Aid: 1987 to 1997, Update. The College Board, September 1997, p. 5

includes loans (54 percent), Pell Grants (11 percent), campus based programs (4 percent) and other federal specially targeted programs (5 percent).[2] (Institutional aid accounts for 20 percent and state grant programs account for 6 percent.)

Taken together, financial aid from all sources reaches a significant proportion of college students. According to the same College Board study cited above, roughly one-half of all undergraduates enrolled at four-year colleges and universities received some type of financial aid in Fall 1992. Michael Nettles and his co-authors describe in their background paper some of the challenges facing current financial aid programs. These include (1) the declining purchasing power of financial aid awards as tuition and fees continue to escalate; (2) the high default rates in the loan programs; (3) the rates of attrition among grant and loan recipients; (4) the lack of consideration given to academic preparation for college and academic performance in college when deciding student loan eligibility; and (5) the growing debt burden of college graduates.

2. **Academic barriers to access.** Educational conditions, beginning in the mid-1960s, eventually persuaded public policymakers that, in addition to financial hardship, a lack of academic preparation should not constitute a barrier to college attendance.

The expansion of the community college sector in conjunction with the public's perceived decline in the quality of the public schools — in part driven by high numbers of underprepared students — contributed to this broadened approach to increasing access. During this time, some educational providers revised their admissions standards downward while others sought to open their doors to virtually anyone seeking the opportunity to pursue a postsecondary education.

This period also witnessed a proliferation in the numbers of students enrolled in remedial education courses in mathematics, science, and English, usually because they lacked the basic skills necessary to perform college level work. The College Board estimates that more than one in four college students take at least one remedial course during their college careers. Community colleges have come to play an increasingly important role in providing developmental or remedial education, in part because their costs are generally lower for both students and the state. Recently, for-profit providers, like Kaplan Educational Centers and Sylvan Learning Systems, have been capturing a larger share of the remediation market.

Percent of all entering first-time freshmen enrolled in remedial courses (reading, writing, or math)

All institutions	29%
Public 2-Year	41%
Public 4-Year	22%

Source: NCES. Remedial Education at Higher Education Institutions in Fall 1995. October, 1996

Several Access Panel participants raised concerns about recent state actions which could be signaling a political change in course. In many states, policymakers are cutting state budgets in the areas that support remedial coursework. And since the early to mid-80s, an increasing number of states have begun imposing statewide minimum admissions requirements, typically based on a combination of such measures as grade point average, standardized test scores, and class rank. Arizona, as Laura Rendón points out in her paper, is one of many states where statewide admissions requirements have been steadily tightened over the years.

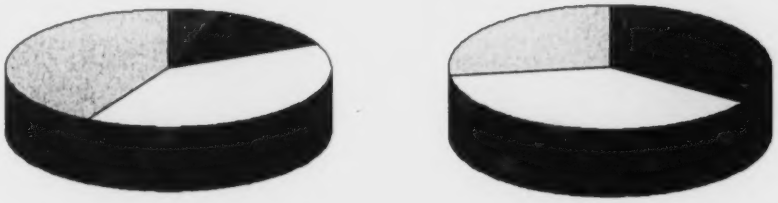
3. **Race and gender barriers to access.** In response to a legacy of racism and the growing influence of the "women's movement," access policies during the 1970s began to place special emphasis on gender and minority status. Colleges and universities modified their admissions policies and structured their financial assistance programs in ways that allowed them to increase their enrollments of women and minorities. Over the last two decades, women and persons of racial and ethnic groups historically underrepresented in higher education have enrolled in college in record numbers, in part, because of affirmative action policies.

The retrenchment of affirmative action on many college campuses comes in the wake of recent Circuit Courts' opinions on Proposition 209 in California and the *Hopwood*

decision in Texas. As many participants noted, further challenges to colleges' use of "weighted" factors such as race or gender in either eligibility, admissions, financial aid, scholarships, or employment considerations could quickly erode the gains that women and minority-group members have made in postsecondary education thus far.

4. **Choice barriers to access.** "Educational segregation," in Judith Eaton's words, "refers to students of specific race, gender or socio-economic status confined to specific sectors of higher education." By the early 1980s, she says, "the rule of thumb....was that the less prestigious the institution, the greater the presence of minorities and women." In response, policymakers sought to extend choice by targeting financial aid programs, based in part on studies that showed income has a direct effect on where and what type of institution students attend.[3] Colleges too began promoting themes of "cultural diversity" and "multiculturalism" on their campuses.

Representation of African-American and Hispanic Undergraduates at Four-Year Institutions, 1995



African American Hispanic

Source: Nettles, Michael, Perna, Laura W., and Millet, Catherine M. "A Proposal to Enhance and Improve Data Collection and Analyses for Examining Student Access to College." A paper prepared for the National Postsecondary Education Cooperative. August 15, 1997.

Despite these efforts, the situation has not improved much for some groups. Nettles reports, for example, a substantial underrepresentation of African-Americans attending colleges and universities with the most competitive admissions standards and their overrepresentation among students attending the less selective and noncompetitive colleges and universities. At issue, said Laura Rendón, "is how to increase the numbers of college-eligible minority students who qualify to enroll in institutions and graduate and professional schools."

Several meeting participants voiced their concern about the lack of substantive data pertaining to the effects of educational segregation on student outcomes. For

example, does society bestow greater advantages on those who attend and graduate from "A" list institutions? Based on his own research, Michael Nettles told the group, "For African American students, enrollment growth has been slower at research and comprehensive universities, yet we do not have adequate information about the consequences in terms of income, learning, and other benefits." While the effects of college choice on student outcomes clearly warrants further attention, several participants spoke of the need to press for "equal access and opportunity" — a reference to the fact we still are far from reaching goals for proportional enrollment and comparable achievement in higher education.

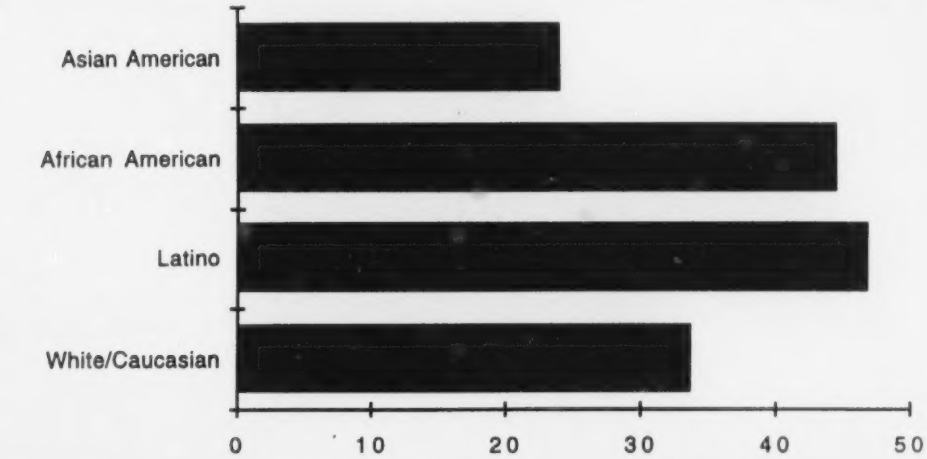
5. **Motivational barriers to access.** By the end of the 1980s, public policy approaches to access came to include efforts to help motivate marginal students to attempt higher education. Often framed as part of larger school reform initiatives, policymakers began looking more to colleges and universities to be active partners in helping public schools raise student aspirations and achievement. Many participants acknowledged that parts of higher education come only reluctantly to the K-16 partnership table; yet several, like Deborah Carter from ACE, spoke promisingly of their organizations' current efforts to strengthen K-12 and higher education linkages. To underscore the importance of such collaborations, one participant cited Clifford Adelman's recent article in *Change* magazine which referred to the centrality of adequate K-12 academic preparation, regardless of race or financial aid, in determining who is most likely to finish a bachelor's degree.[4]

   While today nearly two-thirds of recent high school graduates in the United States go on to college, student motivation varies greatly across racial-ethnic groups. Also, as Laura Rendón points out, these statistics typically fail to account for the alarming number of students who have dropped out along the way. According to Census Bureau data, 9 percent of 16 to 19-year-olds are not high school graduates and are not enrolled in school.[5] The roots of low-motivation and drop-out problems can, in some cases, be traced to poorly funded schools, where students "get the least of the best that American public schools have to offer," says Rendón. She adds, "Many leave high school believing they are not college material."

6. **Technology barriers to access.** Since the 1990s, policymakers have increasingly come to view "technology" — computers and telecommunications-based technologies — as a means for expanding access to postsecondary education. Without the limitations imposed by time and distance, technology potentially can provide educational instruction to students "any time, any place." From Zelema Harris' community college perspective, "Geographical barriers become less significant as an obstacle to access because of technology."

   Policymakers and educators have expressed serious concerns that access to technology resources not become a wedge which divides students into "Haves" and "Have-nots." On the issue of equal access to technology resources, a recent article in the *Chronicle of Higher Education* reports the federal government is considering making financial aid more widely available to students enrolled in distance learning courses.[6] This would allow students who are taking classes toward a certificate and other programs, (rather than just toward associate's or bachelor's degrees) to benefit

Percentage of Students by Race/Ethnicity Who Had Not Applied to Any College by the End of 12th Grade



Source: Adjusted-weight responses, National Education Longitudinal Study of 1988: Second Follow-up (1992). Citation: Hurtado, S., Inkelas, K., Briggs, C. and Rhee, B. (1997). Differences in College Access and Choice Among Racial/Ethnic Groups: Identifying Continuing Barriers, Research in Higher Education, 38 (1): 43-75.

and could also include the cost of a computer. These nascent policies represent the tip of the iceberg for what is to follow in the way of policies for increasing access through the use of technology. (The issue of technology policy and its data systems implications was the subject of an NPEC-sponsored meeting held in August, 1997.)

Section II: Access Reconceptualized

Why Current Definitions of Access are Inadequate

Based on their examination of the evidence, participants who attended the NPEC/ACE Access Policy Panel seemed clear in their convictions: Current public policy approaches for postsecondary access, while able to claim victory for boosting enrollments, have been largely ineffective when it comes to issues of persistence and attainment. Under such policies, postsecondary enrollments have increased overall; yet, the rate of progress for certain groups has been uneven and the "gap" between rates of enrollment and rates of completion remain stubbornly wide. Public policy commitments to access have helped in removing barriers which can prevent college attendance, but as Arthur Hauptman points out, they have failed for the most part to be aligned with appropriate policy incentives and inducements for increasing retention and completion rates.

Drawing from Vincent Tinto's and others' discussion of "access as participation," many meeting participants decided that current enrollment-based definitions of access are inadequate as a policy

tool unless coupled with subsequent results-based outcomes — such as high student achievement and personal goal attainment. Several participants emphasized the point that while these twin goals are indeed related, they individually reflect the societal and individual benefits, respectively, which accrue from a postsecondary education.

Given recent attacks on affirmative action and other shifts in policy for financial aid, admissions standards, and remedial education, the extent to which access policies are reflective of both higher education's public and private "good" is important. Not coincidentally, the debate about policies for promoting access to a postsecondary education is occurring at precisely the same time that higher education's currency in the marketplace is rising. "It all comes down to a matter of what we value," says Laura Rendón. She introduced the concept of "democratic access" based on democratic principles that recognize and respect individual talents, yet focus primarily on America's collective success.

Toward a New Definition of Access

If meeting participants were clear in pointing out the inadequacies of current concepts of access, they were less clear in determining whether a new definition of the term itself is in order. Many did, however, provide constructive insights into how the term's meaning and use could be further delineated. For several participants, defining access as the "initial point of entry" has a certain "richness" as a measurable indicator for researchers and policy analysts. The term itself may not need to be redefined, they suggested, rather "it is our *study* of access that should be reconceptualized." Related to this, Vincent Tinto's suggestion that "participation" may be a more useful way to refer to student experiences in college resonated with many in attendance.

Components of a New Concept of Access

Accordingly, concepts of access need to be broadened along two dimensions. First, access must be reconceived to link enrollment with results-based *outcomes,* as measured by high student achievement and personal goal attainment. Second, access must be reconceived to encompass the *process* by which those outcomes are achieved — that is, the set of conditions both prior to and following a student's "initial point of entry" into postsecondary education.

Discussants reflected on the specific components of a reconceptualized approach to access. The following five themes capture highlights of their conversation:

1. **Access must be reconceptualized to encompass a broader understanding of *who* postsecondary education's "customers" are.** Our understanding of access should be one that is "inclusive of all learners," several participants suggested. Today, fewer than half of the nation's undergraduates are under the age of 25 and attending a four-year college on a full-time basis. Although the demographic profile may change in the next decade as children of the "baby boom" generation begin graduating from high school in record numbers, for now, older, non-traditional students, who are primarily part-time and nonresidential, comprise the new majority. And, as Zelema Harris noted, their goals for attending college may embrace a different set of purposes. For example, "nearly 50 percent of students enrolled in the nation's community colleges are not seeking degrees, but are taking courses to upgrade their job skills," said Harris.

2. **Access must be reconceptualized in terms of *where* postsecondary education takes place.** Participants also suggested that concepts of access be expanded to be "inclusive of all providers of postsecondary education." As access needs have changed, new institutional structures and new delivery mechanisms as diverse as the Western Governors University, the University of Phoenix, and Motorola University have emerged to meet the demand. The delivery of postsecondary education is no longer confined to classrooms or even to traditional colleges and universities; it now occurs in workplaces, malls, and homes as well. With this in mind, Robert Wallhaus pointed out that "students" rather than "institutions" may be the most appropriate "unit of analysis" for policy and data collection purposes.

3. **Access must be reconceptualized to take into account *how* students enter the postsecondary education system.** Particularly in light of recent assaults on affirmative action and other policies for increasing access, Michael Nettles suggested greater attention should be given to examining college admission criteria. With decisions often riding on both subjective information and a prescribed "formula," he asks whether "college and university admissions policies [are] sufficiently flexible to admit talented students from a variety of racial/ethnic and socioeconomic status backgrounds who demonstrate merit in a variety of ways." Arthur Hauptman also offered that, in addressing issues of college choice, we consider the principles of supply and demand: "Letting people vote with their feet is a good idea, but we may be missing other parts of what's happening," he said. "What if they want to go to a school where there are not enough slots?"

4. **Access must be reconceptualized to incorporate a recognition of *when* preparation for a postsecondary education actually begins.** The good news is nearly two-thirds of the nation's high school graduates each year enter some type of postsecondary institution within a year of receiving their high school diploma; the bad news is that the remaining one-third do not. At a time when the difference in earnings between high school and college graduates has almost tripled, this begs the question of "how much access is enough?" Most participants agreed that while 100 percent postsecondary participation may be neither feasible nor desirable, concerted efforts should be made to expand the pool of college-eligible students. In her paper, Laura Rendón shares examples of university outreach strategies that target students in the early grades to instill the idea that college is a viable option and that there are specific requirements that need to be met in order to be eligible to go to college.

5. **Access must be reconceptualized to take into account *what* happens to students after they are enrolled.** As Vincent Tinto put it, "...the point of providing students access to higher education is to give them a reasonable opportunity to participate in college and attain a college degree." Indeed a similar principle applies, as several participants added, whether students are seeking a four-year degree, a professional degree, a certificate or associate's degree, or simply coursework credits. Access goals at any level must be consistent in their focus on the same outcomes — high student achievement and personal goal attainment. To help students achieve those outcomes, we must understand better the nature of student participation in higher education as it shapes student persistence to attainment or completion. As Sylvia Hurtado and Karen Kurotsuchi Inkelas point out in their overview, "present data sets often lack a rich set of measures that describe...the college experience."

Section III: Meeting the Challenges Ahead

In the discussion of NPEC's role in "reconceptualizing access," participants debated in what areas NPEC's efforts might yield the greatest returns. They questioned whether research and data collection activities should target changes in public policies or whether public policies for access as they evolve should shape and guide data demands. The debate about how best to leverage results is — to borrow a metaphor used in another context by Clifford Adelman — a little like a cat chasing its own tail. Ideally, public policy developments should shape data needs and priorities and the findings should help to inform policy decisions. Participants decided the answer is for NPEC to work, in collaboration with other organizations, on both fronts.

Participants offered a number of suggestions for meeting the challenges ahead, several of which were specifically intended to help NPEC plan its next steps. Their findings are summarized under the following recommendations:

- **Advance a student-centered approach to access.** Underlying much of the discussion at the NPEC/ACE Access Policy Panel was the case for a student-centered approach to access. New institutional structures and delivery systems are likely to render as outmoded traditional "institution-centered" approaches to access. The emphasis on high student achievement and personal goal attainment as access outcomes also focus on the "student" as the unit of analysis. Additionally, one group of participants suggested that a reconceptualized approach to access might encompass these four student-centered questions: Are students prepared? Do they attend a postsecondary institution? Where do they go? Do they persist in graduating or what types of outcomes do we look at?

- **Strengthen K-16 linkages.** Participants discussed a number of ways in which NPEC and other higher education organizations can support increased access through strengthened K-16 linkages. Among them: Address the assessment of academic progress; strengthen the transfer function in community colleges along with supporting their role in providing remedial education; and examine the roles of parents, students, colleges and universities, government, and schools in supporting access. Specifically, NPEC should convene an advisory panel which includes K-12 representation. Such a conversation should include a discussion of workforce preparation as well as alternatives to postsecondary education for the segment of the population that for whatever reason does not pursue a formal education beyond high school.

- **Urge better use of existing data.** Vincent Tinto spoke for many when he addressed the need to better "coordinate the work of different agencies that are already collecting data on college students to reach agreement on common definitions and measures." One group suggested NPEC develop an "access taxonomy" for classifying access goals by type. A classification and definition of each element of access (for example, preparation, financial, programmatic, social, cultural, persistence, and legal) could be developed that would in turn constitute a more complete definition of access. Others argued for promoting better communication with state and federal policymakers and a public disclosure of data in a user-friendly format. To reinforce the need for timely information, Kala Stroup remarked that in working with legislators in her state, she

gets asked questions "about what happened this fall, not five years ago." Participants also recommended helping journalists, who are largely responsible for shaping public opinions and attitudes, make sense out of the wealth of information. Additionally, NPEC should work to preserve and expand existing data systems and collection efforts.

- **Encourage experimentation in determining what works and what doesn't.** Several participants offered suggestions for testing new policy approaches for improving access, persistence, and completion rates. As noted earlier, public policies for access have been framed primarily in terms of removing or reducing barriers to college attendance. Both Michael Nettles and Arthur Hauptman argued persuasively in their papers for greater use of incentives and inducements to achieve desired results. Nettles suggested experimenting with the idea of awarding student financial aid upon completion as a way to reduce the drop-out rate. Similarly, Hauptman suggested federal and state governments should consider paying both public and private institutions for each student grant recipient they graduate. At the state level, Kala Shoup recommended examining the effectiveness of financial incentives like Georgia's HOPE scholarship program which is aimed at raising student achievement.

- **Promote a stronger interface between policy issues and data systems.** Most participants resonated with Arthur Hauptman's assertion that "public policies often have unintended consequences which may run counter to the expressed goals of the policies." For many, this notion underscores the need for ensuring that policy development and data collection efforts go hand-in-hand. In evaluating the impact of various policies, one group of participants noted the importance of different types of data, including those "that get behind the numbers." Focus groups, interviews, and other forms of qualitative research may prove to be highly productive avenues into better understandings of access. Some participants cautioned that by avoiding "a reductionist view of access," we may as a result be introducing greater levels of complexity. As one participant wryly observed, "If we need a broader definition of access, then can we fund it?"

- **Improve data collection.** A consistent message conveyed by participants, and one that is confirmed in the research literature as well, is the need for sustained collection of longitudinal data that will inform us about the specific experiences of students in their transition from high school to postsecondary education and throughout their postsecondary education. Postsecondary attendance patterns are becoming more varied and only by tracking individual student experiences over a number of years are we able to understand how students access postsecondary education and whether they continue their participation toward completion. Researchers who regularly analyze federal data sets and write about access, transition, and postsecondary education call for more attention to the development of a rich set of measures that will allow us to understand both high school and college experiences. For example, many advances in the research on college choice and persistence are not reflected in existing data. Attention to the development of new constructs that capture the quality of postsecondary experiences and the participation experiences of various groups of students (differing by race/ethnicity, gender, socioeconomic status, and adults who return after experiences in the job market) is needed. Postsecondary researchers who

understand the limitations of existing data need to be brought into the discussion as plans are developed for data collection in the future.

Conclusion

Participants who attended the NPEC/ACE **Policy Panel on Access and Its Data Systems Ramifications** on September 9, 1997 voiced strong support for NPEC's concerns and interest in tackling the topic of "reconceptualizing access." They concurred that current public policy approaches for postsecondary access, while contributing to increased rates of enrollment, have been largely ineffective when it comes to issues of persistence, attainment, and completion. Accordingly, participants recommended that concepts of access need to be broadened along two dimensions: First, to link enrollment with results-based *outcomes,* as measured by high student achievement and personal goal attainment, and second, to encompass the *process* by which those outcomes are achieved — that is, the set of conditions both prior to and following a student's "initial point of entry" into postsecondary education. They offered a number of suggestions for meeting the challenges ahead, several of which are specifically intended to help NPEC plan its next steps. In characterizing these challenges, ACE staff member Jacqueline King, who served as a respondent to the panel presentations, summed up the attitude of many when she said, "There is a lot of 'will' to affect persistence and the college experience, but it will also entail a lot of hard work." It is also clear NPEC will need new ways to communicate both its research findings and its reconceptualized concepts of access to a broader audience.

ENDNOTES

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ACCESS TO HIGHER EDUCATION

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This paper focuses on the findings of the Access and Opportunities Committee which I chaired for the Illinois Community College System. It then briefly describes some of the policy implications of the committee's report.

Background and Community Colleges' Response

In 1994 the Illinois Board of Higher Education (IBHE) issued a report on Affordability. The purpose of the report was to help students and families better afford a college education. The report was in response to the rising costs of higher education in Illinois. However, the report was mostly geared toward dependent traditional college students, and many of its recommendations did not address the concerns of community college students.

Community college advocates took issue with the state's Monetary Award Program (MAP), a needs-based program, where more and more dollars were going to support the spiraling costs of tuition and fees in other sectors of higher education in the state. At the same time, MAP was not providing access for thousands of community college students. The rationing of the available dollars penalized community college students disproportionately.

The Affordability report dealt with more than financial aid. It addressed students' lack of academic preparation and its impact on time to degree completion. In other words,"Time is money. Nonetheless, most of the report s recommendations centered on traditional college-age students and their parents, even though this group represents only 30 percent of community college students in Illinois.

In February, 1995, The Illinois Community College Board appointed a committee to address issues facing the state s community college students. The committee did not want to simply address the ability of students to gain entrance to higher education, because it recognized that access alone is not enough. Colleges must also provide students with a set of circumstances or opportunities, which will lead toward the attainment of their goals.

Barriers to Access and Opportunity

The report focused on barriers to access and opportunity. Six barriers were identified: financial, personal, preparational, curricular relevance, geographical, and cultural.

Financial Barriers

Community college students apply for both admissions and financial aid late. While data do not exist to support late decision making, anecdotal evidence indicates that students' decisions are based on late information-gathering, such as availability of day care, status of jobs, and ability to pay. The majority of community college students are first-generation college students and they have not been accustomed to long-range planning. For the most part, they have been dealing with day to day survival issues. The Illinois Student Assistance Commission (ISAC) had policies in place that did not support late decision making, and at one point, thousands of students did not receive aid because they missed the deadline date. Dollars that could have supported either moving the deadline dates forward, or year-round processing of applications, were instead used to support the rising tuition and fee rates at other institutional types.

Personal Barriers

The personal needs of community college students tend to center around families and work responsibilities. Also, first-generation college students are at a tremendous disadvantage. Many are fearful about being the first to attend college. They have no family role models and they often question whether they are capable of doing college-level work.

Preparational Barriers

Since our report was written, and since I have had the opportunity to review the data submitted by my colleagues, I am convinced that the lack of academic preparation is the most formidable barrier to access and opportunity.

The Illinois Board of Higher Education recently issued a report on remedial/developmental education in the state's institutions of higher education. Remedial/developmental education is defined as "coursework that is designed to correct skills deficiencies in writing, reading, and mathematics that are essential for college study." The data excluded students enrolled in adult basic education and adult secondary education. The report found that:

- Fourteen percent of Illinois community college students took at least one remedial course in FY96 and 7 percent of university undergraduates did. This compares with national figures of 17 percent for public community colleges and 11 percent for public universities.
- Nine out of ten Illinois students who took a remedial course did so at a community college.
- The majority of remedial instruction is in math. Two-thirds of university and 60 percent of community college remedial credit hours for FY96 were in math.
- Twenty-nine percent of freshmen entering public and private two and four-year colleges enrolled in at least one remedial course.

Considerations for Policy Development:

- Almost half of the students who take remedial courses are older students who have been out of high school for five or more years.
- Reading is a more serious deficiency than math or writing, since it is fundamental for success in all courses.
- Proportionally, more minority students take remedial classes and more remedial reading classes than do white students.
- Students who need only one remedial math or writing class tend to do as well as students who do not need remedial classes.
- Students who need three or four remedial courses are those most seriously at risk.
- As a result of recommendations from the Illinois Board of Higher Education's Committee to Study Affordability, IBHE adopted policies emphasizing the need for institutions to accelerate degree completion for minority, adult, and placebound groups who have historically taken longer to complete their undergraduate degrees.
- Our institutions must answer questions such as: "Are students who take recommended remedial classes in writing more likely to complete freshman composition classes with a grade of C or better than those who don't take recommended remediation?" "Do students who take remedial courses graduate?" "Do they go on to find good jobs?"

Curricular Relevance Barriers

Another barrier to access and opportunity that was identified by the committee was curricular relevance. Most teachers teach what they were taught, and most of our institutions focus on teaching as opposed to learning. Unless we become engaged in understanding the process of learning and its impact on teaching, we will continue to turn out ill-prepared students.

Geographical Barriers

This barrier is becoming less significant as technology-based instructional delivery systems become more prevalent. Nonetheless, students need access to instructional programs that are not offered in their locale without having to pay out of district and out of state charges.

Cultural Barriers

The majority of community college students are women, and our institutions are the overwhelming choice of minorities. However, these students often find themselves in a traditional, monocultural academic environment. The committee posed the question: Should we expect these diverse

students to adapt to the status quo – or should our colleges be challenged to become more inclusive, in both institutional climate and curricula?

Challenges and Recommendations

The committee concluded that six major challenges faced community colleges and offered the following recommendations to address them:

I. **Challenge:** To provide educational opportunities to all residents of the state irrespective of their financial status through modifying the financial aid system, controlling the growth of tuition and fees and other student costs, and increasing federal, state, and business resources in order to make college more affordable.

Recommendations:

1. Lower the Adjustable Available Income (AAI) formula rate in the state monetary award program to the federal methodology rate of 22 percent to increase access to students with low financial resources. Special priority should be placed on serving the need of the independent student with dependents (working parents).

2. Increase financial assistance to those students with zero expected family contribution by enhancing a state assistance program supplemental to the monetary award program which provides funds above tuition and fees for those students with the fewest resources.

3. Ensure that those most in need receive financial assistance by simplifying the application and need evaluation processes, adjusting the application deadlines established for the Monetary Award Program, eliminating deadlines for completion of coursework which handicap students requiring developmental courses, and extending financial aid eligibility to students taking fewer than six hours per semester, thus extending the time needed for degree completion.

4. Create a new legislative initiative for families to save for their children's education that is accessible to "small savers" and that features tax-breaks for educational savings.

5. Support current IBHE policies on tuition and fee increases.

6. Appropriate state funding sufficient to support the mandated scholarship programs or eliminate the programs.

7. Encourage community colleges to develop deferred payment or flexible payment plans for students.

8. Focus the state's financial aid program on the resources of the individual, not the prices colleges charge.

9. Present a recommendation to ISAC which reflects a changing demography by defining need based on the financial resources of the student rather than costs of the individual colleges.

10. Lobby aggressively at the Federal level to protect/expand Pell grants and SEOG for low income students and other student aid.

II. **Challenge:** To implement innovative methods for delivering instruction which will assure access and opportunity to all residents of Illinois regardless of age, locale, or life circumstances.

Recommendations:

11. Collaborate with K-12, community colleges, four-year public and private institutions to expand offerings of credit classes through telecommunications.

12. Encourage dual enrollment of community college students with four-year institutions.

13. Actualize the Illinois State Board of Education concept, "Quality Schools Initiative" (QSI), by providing funding for dual enrollment of high school students in vocational or transfer programs at the community college.

14. Maximize resources by collaboration among community colleges to regionalize programming and examine state policies concerning tuition, chargebacks, and access to housing, to ensure they do not discourage regional and statewide programs.

15. Use community college boundaries to define and facilitate the state school-to-work efforts as there currently exists a working relationship between high schools, community colleges, and area businesses.

16. Designate community colleges as the responsible entity to develop, coordinate and implement a state-wide plan for workforce development.

17. Establish each community college campus as a full-service site for One-Stop Career Centers or, at the minimum, as a satellite site.

18. Expand the Opportunities Programs to all community colleges and increase the client base to assist movement of Aid to Families with Dependent Children (AFDC) recipients into the workforce.

19. Expand the membership of the Joint Education Committee to include membership from the community college sector in order to facilitate the coordination of programs on behalf of students.

20. Expand capstone technological programs with four-year universities which allow students receiving an Associate in Applied Science degree from

community colleges to transfer to four-year institutions without the loss of credits.

21. Continue articulation efforts being undertaken by IBHE and ICCB.

22. Allow community colleges to offer capstone/joint degrees in cooperation with four-year institutions.

23. Study the feasibility of offering an advanced degree between associate and bachelor's degrees.

24. Finalize and activate the Workforce Preparation Action Plan of the State of Illinois Board of Higher Education.

III. **Challenge:** To implement a seamless educational system that moves the students from school to work regardless of what point they enter the community college or their educational background and skill level.

Fourteen percent of adults in Illinois lack a high school diploma. One out of four adults does not possess functional literacy skills.

The challenge to community colleges is to provide a strong developmental program that will address these barriers while easing these students into the "regular" college.

Recommendations:

25. Develop outreach campaigns that target nontraditional students, staffed by persons knowledgeable about and sensitive to their cultures and particular needs.

26. Provide a supportive network for nontraditional students, including advisement, the development of student assistance centers, orientation programs, and the use of peer counselors.

27. Offer GED classes and literacy training on every college campus and integrate these programs with the rest of the college to ease the transition of students into regular college courses.

28. Integrate instruction in reading, writing, speaking, and computing so that learners experience connected learning while improving basic skills. Evaluate developmental programs to document increases in student learning.

29. Remove the limitations in the state and federal adult education funding which, in effect, force students to choose between basic skills instruction and vocational pre-employment instruction.

30. Move the governance and administration of adult education to the Illinois Community College Board and implement a fair and equitable funding system for both community college and secondary school providers.

IV. **Challenge:** To provide an education that truly meets the needs of the student and the community and that guarantees student success in the job market at the same time that it guarantees a highly skilled workforce for business and industry.

Recommendations:

31. Deliver strong, current, technically advanced curricula and programs to ensure that students and businesses succeed in a competitive, global market.

32. Integrate business needs with education's goals through curriculum development, including preparing students to work in a culturally diverse workforce, with input from business or occupational advisory boards.

33. Strengthen ties to employers through CEO site visits, site-based learning, learning activities directed at specific work-related projects and on-site consultations.

34. Develop more true business-education partnerships such as those with Caterpillar, John Deere, and Motorola, where business invests capital and operating funds in the community college in order to provide professional continuing education.

V. **Challenge:** To enhance teaching and learning through 1) expanded use of technology; 2) results of research on teaching and learning; 3) faculty experimentation in classroom teaching; and 4) acknowledgment of student differences.

Recommendations:

35. Use telecommunications to keep faculty abreast of technological advances and effective teaching methods.

36. Encourage and reward the development of teaching behaviors that are recognized as critical success factors in community college teaching: students must be active participants in the process; experiential learning supports theoretical learning; students learn that which is made meaningful; and students need assistance recognizing their individual strengths and weaknesses.

37. Give faculty the opportunity and encouragement to participate in advanced education coursework and other professional development activities that address the needs of adult learners and nontraditional students.

VI. **Challenge:** To provide an inclusive, multicultural climate for learning that acknowledges the diversity of our society and the students we serve and helps prepare students to live and work in a world in which cultural diversity will be a daily reality.

Recommendations:

38. Provide staff/faculty development in gender-balanced, multicultural education so that community colleges do a better job of including the growing number of

culturally diverse students in both the teaching/learning process and the curriculum.

39. Assist community colleges in evaluating, assessing, and creating inclusive educational communities for all students and staff.

Issues That Affect Policy

For policy considerations we need to redefine the definition of vocational education or, at least, describe it better. Many occupational programs, especially in health professions and nursing, utilize selective admissions. Other programs that may be considered vocational such as automotive technology, computer visualization, and computer network management, require higher skill levels than were required years ago due to advanced technology. Strong reading comprehensive skills and a background in math and science are essential to being successful in these programs.

Like the health professions and nursing, these programs do not enroll a significant number of students of color. Most first-generation college students and students who are less prepared academically start out at community colleges. Even though our colleges offer many resources, our current resources often do not meet the needs of these students. For example, our developmental/remedial programs generally are not effective in retaining students who require three or four remedial courses.

Fortunately, there are some success stories. Generally, developmental programs that meet with greater success are those that:

- Are interdisciplinary
- Combine remedial instruction with regular course work (Tech Prep is one example)
- Combine both the affective and the cognitive
- Are intensive
- Create learning communities by keeping students together

Seamless educational systems must be created. We can't wait until students enter our doors. Who will be responsible for ensuring that students are better prepared when they enter our colleges? Since the community college is the choice of many students who need a great deal of support, both personal and academic, then our institutions must engage in consortial arrangements with K-12 and four-year colleges and universities to ensure that teachers, students, and families understand the requirements for college success.

Teacher Preparation

Teacher preparation is key to preparing students for college level work. The report of the National Commission on Teaching and America's Future, which was issued in September, 1996, starts with three simple premises:

- What teachers know and can do is the most important influence on what students learn.
- Recruiting, preparing, and retaining good teachers is the central strategy for improving our schools.
- School reform cannot succeed unless it focuses on creating the conditions in which teachers can teach and teach well.

Another policy issue is performance-based funding, which several states already have adopted. The state of Illinois currently is in the process of implementing performance-based funding, with performance indicators that have been selected by the community colleges themselves. Five goal areas/measures have been recommended:

I. Quality of instructional support services as measured by student satisfaction.

II. Student educational advancement as measured by certificates or degrees earned, transfer, or continued pursuit of educational goals.

III. Attainment of workforce/business and industry goals as measured by employment or continued pursuit of educational goals.

IV. Access to upper-division coursework and baccalaureate degrees as measured by transfer rates.

V. Addressing local community and college needs in the areas of workforce development, technology, and responsiveness to local priorities.

The approach is designed so that each college can earn up to 100 points, based on performance in each of the five areas. The overall goal, of course, is to improve teaching and learning. We must become more accountable for access beyond students entering our doors. We must provide the opportunity for students to achieve their goals.

Still another policy issue deals with our dismal record of working with minority students. Model programs exist throughout the country, yet we have not incorporated them into the fabric of our institutions. Performance-based funding should include a criterion for measuring our success with these populations.

We need also to consider the issue of reverse transfer. In Illinois for example, 32,000 of the nearly one million students enrolled in community colleges have bachelor's degrees or higher. This fact should prompt serious discussion around such key questions as:

- How does reserve transfer affect the community college mission?
- Who should pay for it?

Conclusion

Many of the recommendations from the Report of the Access and Opportunity Committee have been, or are in the process of being, implemented. For example, monetary awards in the amount of $500.00 have been extended to first-time freshmen who have zero-based family contribution. Another example is a statewide grant to create inclusive educational communities for minority student articulation.

The Committee's report will continue to serve as our barometer for gauging educational access in Illinois.

One final note: In the Winter 1996 issue of the Educational Record, Patrick M. Callan points out that the next ten to fifteen years will represent "Tidal Wave II," in terms of the numbers of high school graduates who will seek the opportunity of a college education. The first "tidal wave" was the baby boomers. Callan asks: Will these students have the same opportunity to develop their talents that the nation afforded other Americans during the past 50 years?

Community colleges can provide that opportunity. They are the access point to higher education for millions of students.

REFERENCE

Callan, Patrick M., "Tidal Wave II Challenges Opportunity for All," *Educational Record*, Winter 1996.

ASSESSING THE IMPACT OF PUBLIC POLICIES ON ACCESS TO POSTSECONDARY EDUCATION

Arthur M. Hauptman

The members on this panel have been asked to address a set of questions relating to how access to postsecondary education should be defined and what data policymakers may require to make more informed decisions about improving access, however it is defined. In these remarks, I have attempted to answer these questions from the perspective of a policy analyst by seeking first, to identify the types of public policies which potentially can affect access and, second, by speculating on the possible effects of these policies on access.

My remarks for this discussion are premised on the notion that public policies often have unintended consequences which may run counter to the expressed goals of the policies. For example, I contend here that low tuition policies in some instances may lead to less access, not more. My concern is that data collection and analysis efforts too often are aimed at reinforcing prevailing beliefs rather than testing them. My hope is that my speculations on the effects of policies, some of which I recognize are contrary to popular view, will stimulate discussions about what kinds of data and analysis are needed to move beyond rhetoric and doctrine to measure accurately the impact of various policies on postsecondary access.

The Paradox of Access

The growing level of concern about access in this country is somewhat of a paradox in that the U.S. has the highest college participation rates in the world. More than two-thirds of American high school graduates go on to some form of postsecondary education immediately after high school, and that proportion is more than three-quarters when adult learners are included. The answer to this apparent paradox is that while overall U.S. postsecondary participation rates are very high by international standards, the patterns of participation are uneven. Despite gains over time, the participation rates of low income and minority students continue to fall far below those of higher income and white students. Of perhaps greater concern, the gap in completion rates between disadvantaged and minority students and other groups of students seems to be widening. In this regard, I believe that a full discussion of access issues requires that the standard enrollment-based definition of access be expanded to include measures of retention and degree completion as well.

Possible Public Policies to Promote Greater Access

The impetus for adopting public policies to improve access to postsecondary education derives from the generally-shared belief that inequities in society can be sharply reduced by expanding educational opportunities for underserved populations. There are basically three types of public policies that federal, state, and local governments can employ to improve access:

- State and local government funding, the largest source of taxpayer support for higher education, allows public institutions to charge tuitions and fees well below the per student costs of education. Low tuitions and fees are viewed as a critical policy for

providing access to a broad range of students, but the state funding formulas themselves typically are not viewed as a public policy tool for affecting access.

- Student financial aid programs, which provide grants, loans, and work-study funds, are regarded by many as the primary means of public policy to improve access for students whose family resources are insufficient to meet the total costs of attendance.

- Regulatory approaches and judicial rulings that require institutions to meet certain standards in order to qualify for funding are the third type of public policy tool for promoting access. Affirmative action has been the most prominent and controversial form of regulatory approach.

Because of space limitations and my orientation toward financial issues, I have focused here on the first two categories of public policies, which more relate to financial incentives for students and institutions. I trust others on the panel will address the impact of regulatory policies such as affirmative action and judicial rulings on access.

Has the combination of various public policies achieved the desired result of equalizing educational opportunities? By and large, the answer seems to be no. As already noted, inequalities in college participation and retention continue to exist. Most observers would argue that existing disparities in college participation and completion rates would be far worse if various public policies had not been in place to offset the underlying inequities in society. It may be the case, however, that some very well intentioned public policies – including low tuitions at public institutions and how states fund their public institutions – are contributing to increased disparities in participation rates among various groups of students. This raises a critical question:

Have various public policies had the intended effect of improving access, or have unintended consequences resulted in less access, at least for certain groups of students? We need to examine how the various policies have worked in practice, singularly and in combination, to determine what data are needed to answer this question in the future.

Setting Tuitions at Public Institutions

The largest source of taxpayer funding of higher education in the U.S. is what state and local governments provide to public institutions for operating support. In 1996-97, states and localities provided roughly $45 billion to public institutions for this purpose. This state and local taxpayer support allows public institutions to charge tuition and fees that are far lower than what it actually costs to educate students. It is fair to say that low or no tuitions at public institutions has been viewed as the principal public policy mechanism for providing access to higher education for most of this nation's history. And there is little question that the tradition of pricing public higher education at little or no cost to the consumer was a critical factor in fueling the unprecedented expansion in higher education in this country over the past half century. But even though low tuitions have been extremely important in fueling past enrollment growth, there are several critical limitations to their continued success in expanding access in the future.

First, a low tuition strategy requires governments to provide high levels of funding to institutions to be successful in promoting access. What advocates of the low tuition strategy sometimes ignore is that if state funding is insufficient, lower tuitions and fees can become a detriment to access if the high levels of subsidy required to fund each student means that fewer students can be accommodated at any given budgetary level. A policy of low tuitions combined with low levels of governmental support thus may result in lower levels of college participation, not higher ones, if slots have to be more carefully allocated. This helps to explain why some states have low college participation rates despite charging relatively low tuitions at their public institutions. It also helps to explains why other countries have much lower college participation rates than the U.S. despite typically charging lower tuition and fees.

Second, low tuition policies tend to result in a regressive distribution of state taxpayer dollars and may squeeze out lower income students from the best public institutions in the state. This happens when low levels of tuition and fees serve as a magnet to attract higher income students. Since college admissions decisions are made with little or no distinction for the family financial circumstances of a student, increased numbers of well prepared applicants from higher-income families can lead to fewer openings for less prepared students from lower-income families (assuming that public sector enrollments, particularly at flagship institutions, are somewhat fixed, at least in the short run). This helps to explain why some studies have indicated that the median and average family income of students attending flagship public institutions is higher than for students attending private institutions in a number of states.

Third, maintaining relatively low levels of tuition and fees at public institutions does not match the level of personal economic benefits that students derive from receiving an education at these institutions. The difference in earnings between those who go to college and those who do not is at an all time high. The tuitions and fees that most public institutions charge represent only a very small proportion of the additional economic benefits that students gain on average. This disparity has led many observers to suggest that public sector tuition and fees should be increased to reflect more of the private economic benefit received.

For these and other reasons, more and more states have moved away from the low tuition tradition over the past two decades. With heightened pressure to fund prisons, health care, and elementary and secondary education needs, states are finding they can no longer afford to sustain the levels of taxpayer support necessary to subsidize college tuition levels while maintaining access goals. Economic recessions have also crimped many states' ability to contribute. Most states have responded to these financial pressures by increasing public sector tuition and fees at rates far in excess of inflation. Many of the states that have moved in the direction of higher fees have done so by establishing cost-sharing policies, in which public sector tuition and fees are set as a proportion of the costs of educating a student. Whatever the reason for the increase, public sector tuition and fees now constitute one-fifth or more of total public institutional revenues nationwide, up from less than one-tenth of revenues as recently as a decade ago.

The flip side of this argument is the presumption that higher public sector tuition and fees play a critical role in restricting access to higher education. Many studies over the years have attempted to measure the degree to which higher tuitions discourage students from attending. Most of these studies, however, focus on the demand side of the equation, namely, how student consumers respond to higher prices. I would assert that the supply side of the equation is equally if not more important in determining enrollment levels. That is, the number of slots that institutions provide, which is a function of how much

total resources are derived from both public and private sources, may be a better predictor of enrollment levels than tuition and fees, especially when the number of qualified applicants exceeds the number of available seats.

Cost-sharing policies that tie tuition and fees to per student costs of education to reflect the inherent private benefits of a college education, however, may also serve to restrict access. These cost-sharing arrangements, for example, may encourage institutions to raise funds privately or publicly and then build these funds into their cost base, thereby increasing not only their costs per student but also their tuitions and fees. Public institutions may also decide to cap their enrollments as a means for stretching their scarce state resources. Under a cost sharing approach, enrollment caps can have the effect of increasing costs per student and therefore would increase the tuitions and fees that an institution may charge. It could therefore be the case that cost sharing policies encourage cost escalation rather than cost reduction and may also inadvertently lead institutions to restrict access rather than increase it.

To avert these problems with cost sharing formulas, some states have begun to limit increases in public sector tuition and fees to the rate of inflation. I believe this is a good step in that tuitions and fees at public institutions should be tied to a variable that public institution officials are unable to influence. Tying tuitions to inflation or some other economic measure also has the advantage of making public sector tuitions and fees more a measure of ability of the general population to pay for college than as a vehicle for financing the institution, which is how most states and institutions have typically thought of tuitions and fees. The problem with limiting tuition increases to inflation growth, however, is that over time public sector charges as a proportion of income will actually decrease because inflation does not include economic growth. It would be preferable, in my opinion, to tie public sector tuitions to an economic variable that includes both inflation and economic growth. Two such variables are median family income or disposable personal income per capita in the state.

Regardless of what measure public sector tuition and fees are tied to, states also need to consider how to break the traditional cycle of public sector tuitions rising most rapidly during periods of economic recession. This pattern, which occurs because state funds become more restricted during recessions and public sector tuition and fees are raised to make up for the shortfall in state funding, can be a large bar to access since tuitions tend to increase the most when students and their families can least afford it. The solution lies in states trying to stabilize their higher education funding patterns, either by building reserves during good times or borrowing during bad times to smooth out the flow of funds over the economic cycle. Very few if any states or public institutions have been willing to make such arrangements, however.

State Funding Formulas

The formulas states use to fund institutions represent another potential policy vehicle for improving access. But these formulas are rarely utilized for the purpose of increasing access. Instead, they are viewed principally in virtually all states and most countries around the world as a means for providing operating support to institutions.

Institutional funding formulas in most states are a combination of two basic factors: the number of students enrolled in an institution and the per student costs of education. As a result, these formulas in most states have two particular shortcomings. First, they fail to recognize the different needs,

costs, and requirements of various types of students. They reward institutions just as much for the rich, well-prepared students they enroll as they do for the disadvantaged students with potential who may require substantially more investment in order to succeed. Given this incentive structure, it is little wonder that institutions try to enroll as many well-prepared students as they can. It is also in the institution's interest to enroll as many students from well-to-do families as they can since these students will be able to pay without requiring the institution to provide any financial aid, thereby once again freeing up resources to be used for other purposes. To provide incentives for public institutions to enroll more low income and minority students, states should consider paying their public institutions more for the students they enroll from these groups than for students whose families are better off.

The second drawback of the funding formulas in virtually all the states is that they make no provision for whether students graduate. Institutions are paid on the basis of the number of students enrolled, not on the number of graduates. Thus, most institutions have little financial incentive to make sure that their students graduate in a reasonable amount of time. On the contrary, enrollment-driven funding formulas may encourage institutions to keep students enrolled as long as possible. This is not to suggest that institutions go out of their way to prevent their students from graduating. But it seems clear that there is little or no financial incentive for institutions to make extraordinary efforts to improve the rate at which their students graduate. The fact that degree completion rates are so low in this country, especially at public institutions, raises questions whether institutional funding policies have played a role. To provide some incentive for institutions to improve the rate at which their students graduate and to shorten the time-to-degree, states should consider allocating a portion of their higher education funding of institutions on the basis of how many students graduate.

As a general matter, there has been more reliance on regulatory activities, such as affirmative action policies or judicial rulings on desegregation, to achieve greater degrees of access for low income and minority students than on any systematic set of financial incentives for institutions, either in the form of carrots or sticks. At the federal level, the primary programs relating to institutions has been earmarked funds in the Title III Strengthening Institutions program and other federal categorical programs. One important policy question requiring considerable further data collection and analysis is what impact regulatory, judicial and earmarked funding approaches have had over time on expanding opportunities for low income and minority groups of students.

The Student Aid Programs

To summarize the discussion thus far, how states fund their public institutions and how tuitions and fees are set for public institutions may exacerbate existing inequities in society. As a result, federal and state student aid programs are called upon not only to solve the underlying inequities in society, but also to reduce whatever additional inequities may have been created by the patterns of institutional funding or public sector tuition policies. The student aid programs, however, may not be up to the task of reducing these inequalities, for the following reasons:

First, student aid programs receive a distinct minority of the taxpayer funding devoted to higher education in this country. The federal government spends less on student aid than it provides to institutions to support campus-based research and other categorical programs. State student aid programs receive a very small proportion of total state funding for higher education. Nationwide, student aid programs account for roughly 6 percent of total state spending on higher education. Spending for federal

and state student aid programs combined are roughly one-third of what state and local governments provide in the form of operating support for public institutions.[1]

Second, many student aid programs are not well-designed to offset the adverse effects of higher public sector charges for the most disadvantaged students. Most state grant programs, for example, meet only a portion of a student's need. In addition, very few state grant programs meet the needs of all eligible students; instead, awards are provided for only a percentage of eligible students. By meeting a portion of total costs for some but not all needy students when tuition and fees increase at public institutions, most states are not providing a safety net for all students who will find the higher charges a real burden. There is also the question of how institutional aid programs relate to government-funded ones. Most public institutions provide relatively little in the way of student financial aid, relying instead on low tuitions, state grant programs, and loans to meet the needs of their students. The aid that is provided by the institutions themselves may or may not reinforce federal or state aid policy goals.

Third, in some cases student aid programs may be an impetus for higher tuitions and other charges. There is an ongoing debate about whether the federal aid programs contribute to tuition inflation. I recently have argued that it is important to distinguish among the various student aid programs in assessing their relationship to tuitions and other charges. I believe a strong case can be made that loans have probably contributed more to the pricing structure, especially at private institutions, than have grants. This issue of student aid and college costs also applies at the state level. In many states, for example, the amount of aid that students at private institutions receive is a function of how much the institution charges and the family is able to contribute, and thus may serve as an incentive for schools to raise their prices.

Fourth, the emergence of loans as the primary source of student aid may be extremely detrimental to efforts to improve access. Loans have undoubtedly increased access to a broad range of institutions for many students. But low income and minority students seem reluctant to borrow, with good reason, and this borrowing reticence may be an obstacle which prevents many students from going to college or leads them to choose less expensive options which entail less borrowing. It is also evident that the extensive use of borrowing, which used to be limited mostly to students attending private and proprietary institutions, is now more common in the public sector as well. Perhaps the most negative aspect of increased dependence on loans are the growing numbers of students who lack basic skills yet are required to borrow in order to take remedial courses they need to do college level work. Despite all the rhetoric about the harmful effects of more borrowing, however, many are unwilling to address this issue other than argue unrealistically for more grant aid. This proposed grant/loan trade-off is unrealistic because, given current resource constraints, grants cannot be increased sufficiently to make up for what students now borrow. Policy makers have been unwilling to take the difficult steps necessary to reduce excessive borrowing.

This question of coordination of student aid and fee policies should also be examined in the context of the heated debate in many states over the advisability of moving away from the tradition of low tuition and toward a high tuition/high aid strategy. Most private institutions in the 1980s successfully adopted a high tuition/high aid policy, which entails increasing tuitions and fees more rapidly than inflation and increasing student aid to allow lower income students to attend in the face of higher prices.

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[1] These figures include federal loan subsidies and default payments, but exclude the volume of loans made under federal auspices. Total federal student aid, including loan volume, roughly equals what states and localities spend for institutional support.

The transferability of the high tuition/high aid strategy to the public sector may be limited, however, the success of this strategy at many private institutions depends on the institution's ability to set its own tuition and fees and to coordinate its tuition and aid policies. To the extent that many public institutions do not set their tuitions and do not have access to tuition and fee revenues (if they are reappropriated to the state), the high tuition/high aid strategy is likely to be less successful in the public sector.

To help ensure the maximum effectiveness of the various student aid programs in meeting the goal of greater access, I believe a number of steps need to be taken:

- The proportion of state funds for higher education devoted to student aid should be substantially increased from its current level of roughly 6 percent.
- Federal and state student aid programs should be modified to more directly insulate the most disadvantaged students from the impact of higher tuitions and fees.
- The federal and state governments should consider paying both public and private institutions for each student grant recipient they graduate.
- Borrowing by at-risk students, particularly those requiring remediation, should be reduced or eliminated by looking to alternative financing schemes that combine more grant aid with government payments in lieu of tuition to providers of education and training who do a good job at improving the skills of at-risk students.

Determining the Impact of Public Policies on Access: Some Questions to Ask

In these remarks, my purpose has been to raise questions about the possible effects various public policies may have on access. Gaining a better understanding of the obstacles to greater access for low income and minority students, and achieving higher levels of access for these students, will require designing data collection and analysis efforts that seek to examine a number of the difficult questions that were implicit in the discussion here. To summarize, these questions include:

- Under what circumstances do low tuition policies for public institutions appear to result in greater or lesser college participation rates of different groups of students?
- What has been the effect on access of states adopting cost sharing policies in the setting of public sector tuition and fees?
- What has been the experience of states that have limited public sector tuition and fees increases to the rate of inflation or that have frozen public tuition and fees?
- When states and public institutions have established enrollment caps, how have these limits on enrollments affected access for different groups of students?
- To what extent are changes in enrollments over time more a function of supply side considerations than the price-based demand decisions of consumers?
- How do state funding formulas affect access for different groups of students?

- How have state funding formulas and the student aid programs affected graduation rates and time-to-degree?
- What has been the impact over time of affirmative action programs on access?
- How have participation patterns changed in states under desegregation orders?
- What's the relative impact of institutional funding and student aid programs on access for different groups of students?
- To what extent do various federal and state student aid programs affect the tuition and fees that institutions charge?
- Has the growing amount of institutional student aid reinforced or contradicted the goal of providing more access to disadvantaged groups of students?
- To what extent has the growing reliance on loans blunted or enhanced efforts to increase access for different groups of students?

RESEARCH QUESTIONS AND DATA RESOURCE NEEDS FOR EXAMINING STUDENT ACCESS TO HIGHER EDUCATION

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Introduction

Expanding student access to college has been a leading mantra of American higher education policymakers and leaders for a little more than the latter half of the 20th century. Although enacting policies and taking actions that lead to greater access are their primary functions, policymakers and educational leaders must also be concerned about periodically evaluating their policies and actions. This involves raising the appropriate policy questions, generating the necessary data and information for measuring progress, and enacting new strategies that aim toward achieving greater access.

This paper examines some of the important policy issues pertaining to student access to higher education and raises evaluation questions for which evaluation research is needed. For illustrative purposes, the paper presents data that show the progress the nation has made in expanding access persistence and degree completion for various segments of the population at different levels, types and qualities of colleges and universities.

Because financial aid has been the principal vehicle that public policymakers use to pursue greater access for students in higher education, trends in various types of student aid are presented along with some pertinent research questions for which new data are needed. The additional data recommended are required for constructing a better profile of the status of student access to higher education and for evaluating the policies and programs that are designed to achieve access. Finally, progress made by the most selective colleges and universities in the nation toward achieving greater access and opportunity are presented in order to raise new questions about how college and university admissions policies are used to expand access to college.

Defining the Access Issues

Student access to college may seem at times to be a clear-cut and easy concept to grasp. It is, however, a fairly complex issue. In part, the complexity is due to the variety of special groups in the nation that compete for target status, the continuous changes in societal needs and political pressures that causes shifts in policy. The focus of efforts to achieve access has shifted from time to time over the past five decades from veterans of World War II to more contemporary emphases upon women, African Americans, Hispanics, Native Americans and the economically disadvantaged. For the moment it seems that underrepresented minorities and low socioeconomic status citizens are the dominant foci of efforts to expand student access.

Another factor that contributes to the complexity of student access is the many points in the educational pipeline that have an important relationship to higher education access. At the pre-collegiate stages of the pipeline, academic achievement in elementary and secondary schools to prepare for college

are important dimensions of access. The pre-college academic preparation combined with the college and university admissions policies and standards are all related to whether students are qualified to attend college at all, and if so, the types and quality of colleges available for them to attend. These factors are also related to the level of student diversity that individual colleges and universities are able to achieve. College academic performance, persistence and degree progress also contribute to access when access is defined not simply as college entry but also as obtaining an associate's or bachelor's degree. To the extent that students' post-baccalaureate educational and occupational achievements are related to the quality and type of colleges and universities they attend and the quality of their college experiences, then these factors too become important indicators of access.

A Policy Analysis Context for Examining Student Access to Higher Education

The three major vehicles that policymakers and educators use to expand access are financial aid, college admissions criteria and policies, and financial resources to support the demand for instruction. Beginning with the Veterans Readjustment Act in 1944, followed by the initial Higher Education Act of 1965 and subsequent reauthorizations, the national government has provided leadership for expanding student access to higher education. The principal tool has been financial aid for individual members of targeted groups. The groups have included veterans of military service and economically disadvantaged students, and to a lesser extent women and underrepresented minorities.

The fifty states and their individual colleges and universities have chimed in with the national government by launching their own initiatives to expand student access. Their levers for expanding access have included building new campuses primarily during the 1960s and 70s to accommodate more students and establishing student financial aid programs, some of which are modeled after those of the national government. In the southern states, and a growing number of other states, the Federal Courts have played a role in student access to college. The courts have often debated and decided on issues that affect resource allocations to support access.

Individual colleges and universities have also advanced the student access movement by establishing either flexible or open admissions policies. The consequence of these policies is that every citizen with the requisite high school diploma is provided a place somewhere in a college or university. U.S. colleges and universities have also established a record of providing need based financial assistance to expand student access. The consequence of all of these policies has been broader access and opportunity for students and enormous overall growth in American higher education enrollments and funding.

On one hand, the U.S. deserves to be extolled for its unparalleled record of pursuing access and opportunity for its citizens as well as for foreign visitors. On the other hand, it could stand to be admonished because of the present societal uncertainty about the achievements, status and conditions of access, and the lack of clarity about future directions. Student access to higher education has multiple meanings and little attention has been given to constructing adequate measures for assessing the quality and efficiency of the programs and policies that are instituted to achieve greater access. The important assessment and evaluation questions can be examined under the three broad categories of student participation, financial aid policies, and college and university admissions policies.

The data at the national level on student participation are available through the Integrated Postsecondary Education Data System (IPEDS). Data and information for examining access as it relates to finances and college level admissions are less available. Despite a national investment of resources

into the cross-sectional National Postsecondary Student Aid Study (NPSAS) and its two longitudinal descendants, Beginning Postsecondary Students (BPS) and Baccalaureate and Beyond (B&B), many of the important policy questions concerning the relationship of financial aid to student access are unanswerable with existing data.

The third category, the relationship of student admissions policies to access, is a topic of great interest today because of assaults upon affirmative action. Consequently, much of the necessary data about variations in the policies and criteria used for admitting and retaining college students resides at the campus level. Some of the critical policy questions pertaining to each of these are presented below, along with the challenges facing policy researchers and evaluators as they attempt to assess progress in implementing and evaluating policies and programs aimed at achieving greater access.

Student Participation

Trends in Student Access

Among the important questions pertaining to student participation are the following:

- How much access and opportunity have been achieved for America's economically disadvantaged citizens and underrepresented minorities?
- Are economically disadvantaged and underrepresented minority students attending the full range of colleges and universities in acceptable numbers?
- Are the learning and other developmental experiences of college and university students indistinguishable by social class and race/ethnicity?
- Are the benefits of higher education equivalent for students from the broad range of socioeconomic, racial and ethnic backgrounds?

It took 312 years (1948) after the founding of America's first college for the first one-million students to enroll in a single year. Today, just five decades later, over 14 million students are enrolled. Approximately 62 percent of the nation's high school graduates each year enter some type of postsecondary institution within a year of receiving their high school diploma. Even though some ethnic minority groups continue to be underrepresented among the nation's college and university students and degree recipients, their numbers have been increasing faster than the overall rate of growth. Table 1 presents the recent enrollment trends by race/ethnicity. In 1995, African Americans and Hispanics, respectively, comprised about 10.9 percent and 8.3 percent of the nation's undergraduate students. For both groups, this is their highest representation ever. Moreover, the number of African American and Hispanic undergraduates has grown faster than the overall number.

Figure 1 illustrates the rate of growth in undergraduate enrollment during the present decade by race/ethnicity. The data illustrated in Figure 1 reveals that the sub-groups of men and women who have been least represented in higher education have gained access at impressive rates during the present decade. Between 1990 and 1995 for example, Asian women and Hispanic women have increased their enrollment by 43.9 percent and 42.8 percent, respectively, among undergraduate students in the nation's colleges and universities.

Table 1. Trends in Total Undergraduate Enrollment at America's Colleges and Universities by Race and Sex: Fall 1990 to Fall 1995 (numbers in thousands in parentheses)

				White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1990	100.0%	45.0%	55.0%	77.5%	35.0%	42.5%	9.6%	3.7%	5.8%	6.1%	2.7%	3.3%	6.8%	3.5%	3.3%
	(11,959.1)	(5,379.8)	(6,579.3)	(9,272.6)	(4,184.4)	(5,088.2)	(1,147.2)	(448.0)	(699.2)	(724.5)	(326.9)	(397.6)	(814.7)	(420.5)	(394.1)
1991	100.0%	44.8%	55.2%	76.4%	34.4%	42.1%	9.9%	3.8%	6.0%	6.5%	2.9%	3.6%	7.2%	3.7%	3.5%
	(12,439.3)	(5,571.0)	(6,868.3)	(9,507.7)	(4,273.0)	(5,234.8)	(1,229.3)	(478.1)	(751.1)	(804.2)	(361.4)	(442.7)	(898.1)	(458.5)	(439.6)
1992	100.0%	44.5%	55.5%	74.9%	33.5%	41.4%	10.2%	4.0%	6.3%	7.1%	3.2%	3.9%	7.8%	3.9%	3.9%
	(12,537.7)	(5,582.9)	(6,954.8)	(9,387.6)	(4,195.5)	(5,192.1)	(1,280.6)	(495.6)	(785.0)	(887.8)	(397.1)	(490.7)	(981.7)	(494.8)	(486.9)
1993	100.0%	44.5%	55.5%	73.8%	33.0%	40.8%	10.5%	4.1%	6.4%	7.4%	3.3%	4.1%	8.2%	4.1%	4.1%
	(12,324.0)	(5,483.7)	(6,840.3)	(9,100.4)	(4,067.0)	(5,033.4)	(1,290.4)	(499.6)	(790.8)	(918.1)	(409.2)	(508.9)	(1,015.1)	(507.9)	(507.2)
1994	100.0%	44.2%	55.8%	72.6%	32.3%	40.3%	10.7%	4.1%	6.6%	8.0%	3.5%	4.4%	8.7%	4.3%	4.4%
	(12,262.6)	(5,422.1)	(6,840.5)	(8,904.9)	(3,957.9)	(4,946.9)	(1,316.9)	(502.8)	(814.1)	(979.3)	(434.5)	(544.8)	(1,061.5)	(526.9)	(534.6)
1995	100.0%	44.2%	55.8%	72.0%	32.0%	40.0%	10.9%	4.1%	6.8%	8.3%	3.6%	4.6%	8.8%	4.4%	4.5%
	(12,231.7)	(5,401.1)	(6,830.6)	(8,805.6)	(3,918.1)	(4,887.5)	(1,333.6)	(506.8)	(826.9)	(1,012.0)	(444.2)	(567.8)	(1,080.5)	(532.1)	(548.4)
Percentage Change															
1990 to 1991	4.0%	3.6%	4.4%	2.5%	2.1%	2.9%	7.2%	6.7%	7.4%	11.0%	10.6%	11.4%	10.2%	9.0%	11.6%
1991 to 1992	0.8%	0.2%	1.3%	-1.3%	-1.8%	-0.8%	4.2%	3.6%	4.5%	10.4%	9.9%	10.8%	9.3%	7.9%	10.7%
1992 to 1993	-1.7%	-1.8%	-1.6%	-3.1%	-3.1%	-3.1%	0.8%	0.8%	0.7%	3.4%	3.1%	3.7%	3.4%	2.6%	4.2%
1993 to 1994	-0.5%	-1.1%	0.0%	-2.1%	-2.7%	-1.7%	2.1%	0.6%	3.0%	6.7%	6.2%	7.1%	4.6%	3.7%	5.4%
1994 to 1995	-0.3%	-0.4%	-0.1%	-1.1%	-1.0%	-1.2%	1.3%	0.8%	1.6%	3.3%	2.2%	4.2%	1.8%	1.0%	2.6%
Total Change	2.3%	0.4%	3.8%	-5.0%	-6.4%	-3.9%	16.3%	13.1%	18.3%	39.7%	35.9%	42.8%	32.6%	26.5%	39.1%

Source: Integrated Postsecondary Education Data System, "Enrollment" Survey

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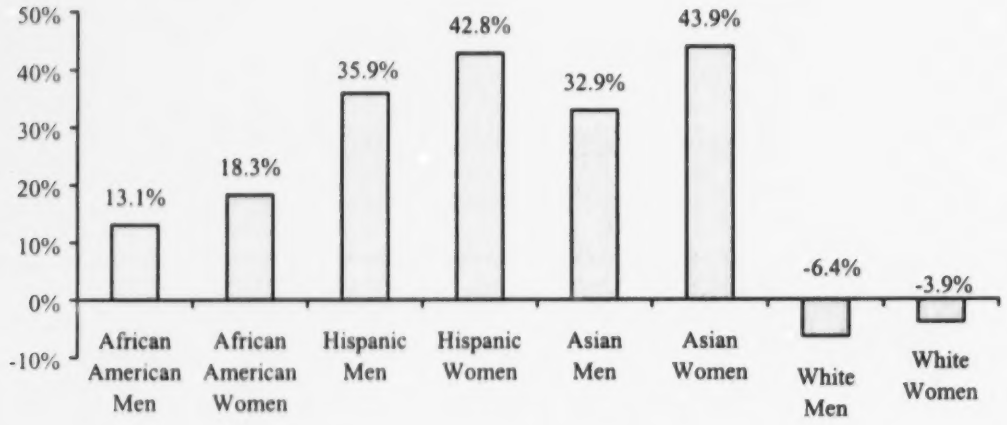
Figure 1. Change in the Number of Undergraduates Enrolled at Colleges and Universities Nationwide: 1990 to 1995



Source: Integrated Postsecondary Education Data System (IPEDS)

Table 2 shows the highest level of education attained by students of various socioeconomic status backgrounds. Substantial gaps remain between the percent of students from the lowest, middle, and highest socioeconomic status who receive bachelor's, Master's and first-professional degrees. High school is the highest level of education attained by 64.6 percent of students from the lowest quartile of socioeconomic status, compared to 53.8 percent of those from the middle two quartiles and 32.7 percent of those from the lowest quartile. In contrast, 41.2 percent of students from the highest socioeconomic quartile attain bachelor's degrees compared to 19.0 percent of the students in the middle two quartiles, and 6.4 percent of the students from the lowest quartile. Similarly, 6.9 percent and 2.7 percent of the highest socioeconomic quartile students complete Master's and first professional degrees, respectively, compared to only seven-tenths of one percent and one-tenth of one percent of students from the lowest socioeconomic status quartile.

The overall enrollment growth and the growth in representation by race and sex and other demographics are useful as general markers of success in achieving greater student access to higher education. Taken altogether, however, they do not provide sufficient information. As a start, a more refined perspective might include a look at how the various levels, types and status of colleges and universities contribute to the overall growth, and how various policies and practices that are instituted in the broad political arena and on individual campuses promote varying degrees of growth. To the extent that graduating from college is more beneficial than simply attending, it is also important to examine rates of degree completion versus attrition. Because of the need to spread around limited resources, assessing the rate that students progress through the curriculum is also important. And finally, the quality of students' educational experiences as measured by their acquisition of knowledge and skills is an important indicator of access.

Table 2. Highest Level of Education Attained by 1980 High School Sophomores by Socioeconomic Status (SES) Quartile: 1980 to 1992

Educational Attainment	Lowest SES Quartile	Middle SES Quartiles	Highest SES Quartile
Total	100.0%	100.0%	100.0%
Less than High School	9.0	3.9	1.4
High School	64.6	53.8	32.7
Certificate	12.3	11.5	7.0
Associate's Degree	6.9	9.1	7.6
Bachelor's Degree	6.4	19.0	41.2
Master's Degree	0.7	2.0	6.9
Professional Degree	0.1	0.5	2.7
Doctorate	--	0.1	0.5

Source: The Digest of Education Statistics, 1996

Two-year Colleges versus Four-year Colleges and Universities

African Americans and Hispanics represent a higher percentage of enrollments in two-year colleges than in four-year colleges and universities, whereas the opposite is the case for Whites. Table 3 shows that, in 1995, African Americans and Hispanics represented 11.3 percent and 11.1 percent, respectively, of two-year college enrollments and Table 4 shows that African Americans and Hispanics represented 10.6 percent and 6.0 percent, respectively, of four-year college and university enrollments. Hispanic enrollment in two-year colleges increased by 43.7 percent during the first half of the present decade and by 34.4 percent at four-year colleges and universities. Over the same period, African American enrollment increased by 19.3 percent in two-year colleges and by 14.3 percent in four-year colleges and universities. In 1995, approximately 53.4 percent of African Americans, 39.9 percent of Hispanics and 56.9 percent of White undergraduates were enrolled in four-year colleges and universities with the balance attending two-year colleges.

Types of Universities and Colleges

Table 5 presents the change in the distribution of African Americans, Hispanics, and all students enrolled in universities and colleges for the eleven year period from 1984 through 1995 by Carnegie classification and Table 6 presents the change in the distribution by the selectivity of the universities and colleges over the same period. In terms of Carnegie classification, Table 5 shows a slight shift upward in the percent of college and university students attending the comprehensive colleges and

Table 3. Undergraduate Enrollment at Two-Year Institutions, Race, and Sex: Fall 1990 to Fall 1995
(number of students in parentheses)

				White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1990	100.0%	42.6%	57.4%	75.5%	32.1%	43.4%	9.9%	3.7%	6.2%	8.1%	3.6%	4.5%	6.5%	3.2%	3.3%
	(5,213,165)	(2,221,642)	(2,991,523)	(3,937,843)	(1,673,267)	(2,264,576)	(516,022)	(195,281)	(320,741)	(422,583)	(188,299)	(234,284)	(336,717)	(164,795)	(171,922)
1991	100.0%	42.5%	57.5%	74.4%	31.5%	42.9%	10.2%	3.8%	6.3%	8.5%	3.8%	4.8%	6.9%	3.4%	3.6%
	(5,624,976)	(2,390,541)	(3,234,435)	(4,182,724)	(1,772,204)	(2,410,529)	(571,830)	(215,230)	(356,600)	(480,004)	(212,649)	(267,355)	(390,418)	(190,458)	(199,960)
1992	100.0%	42.2%	57.8%	72.2%	30.3%	41.9%	10.5%	3.9%	6.6%	9.5%	4.2%	5.3%	7.8%	3.7%	4.0%
	(5,698,715)	(2,404,271)	(3,294,444)	(4,115,646)	(1,729,274)	(2,386,372)	(596,784)	(221,286)	(375,498)	(542,818)	(240,206)	(302,612)	(443,467)	(213,505)	(229,962)
1993	100.0%	42.1%	57.9%	71.1%	29.9%	41.3%	10.7%	4.0%	6.7%	10.0%	4.4%	5.6%	8.1%	3.9%	4.2%
	(5,537,730)	(2,333,927)	(3,203,803)	(3,939,053)	(1,653,626)	(2,285,427)	(594,448)	(220,788)	(373,660)	(555,431)	(245,141)	(310,290)	(448,798)	(214,372)	(234,426)
1994	100.0%	42.0%	58.0%	69.6%	29.1%	40.5%	11.1%	4.1%	7.0%	10.8%	4.7%	6.0%	8.5%	4.1%	4.5%
	(5,501,980)	(2,310,565)	(3,191,415)	(3,829,322)	(1,603,702)	(2,225,620)	(610,375)	(223,769)	(386,606)	(592,622)	(260,028)	(332,594)	(469,661)	(223,066)	(246,595)
1995	100.0%	42.4%	57.6%	69.0%	29.3%	39.7%	11.3%	4.2%	7.1%	11.1%	4.8%	6.3%	8.6%	4.1%	4.5%
	(5,457,132)	(2,313,515)	(3,143,617)	(3,766,868)	(1,599,860)	(2,167,008)	(615,424)	(227,467)	(387,957)	(607,083)	(264,650)	(342,433)	(467,757)	(221,538)	(246,219)
Percentage Change															
1990 to 1991	7.9%	7.6%	8.1%	6.2%	5.9%	6.4%	10.8%	10.2%	11.2%	13.6%	12.9%	14.1%	15.9%	15.6%	16.3%
1991 to 1992	1.3%	0.6%	1.9%	-1.6%	-2.4%	-1.0%	4.4%	2.8%	5.3%	13.1%	13.0%	13.2%	13.6%	12.1%	15.0%
1992 to 1993	-2.8%	-2.9%	-2.8%	-4.3%	-4.4%	-4.2%	-0.4%	-0.2%	-0.5%	2.3%	2.1%	2.5%	1.2%	0.4%	1.9%
1993 to 1994	-0.6%	-1.0%	-0.4%	-2.8%	-3.0%	-2.6%	2.7%	1.4%	3.5%	6.7%	6.1%	7.2%	4.6%	4.1%	5.2%
1994 to 1995	-0.8%	0.1%	-1.5%	-1.6%	-0.2%	-2.6%	0.8%	1.7%	0.3%	2.4%	1.8%	3.0%	-0.4%	-0.7%	-0.2%
Total Change	4.7%	4.1%	5.1%	-4.3%	-4.4%	-4.3%	19.3%	16.5%	21.0%	43.7%	40.5%	46.2%	38.9%	34.4%	43.2%

Source: Integrated Postsecondary Education Data System (IPEDS)

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Table 4. Undergraduate Enrollment at Four-Year Institutions, Race, and Sex: Fall 1990 to Fall 1995
(number of students in parentheses)

				White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1990	100.0%	46.8%	53.2%	79.2%	37.3%	41.9%	9.3%	3.7%	5.6%	4.5%	2.1%	2.4%	7.1%	3.8%	3.3%
	(6,719,023)	(3,146,990)	(3,572,033)	(5,318,301)	(2,504,676)	(2,813,625)	(622,945)	(249,058)	(373,887)	(300,320)	(137,763)	(162,557)	(477,457)	(255,493)	(221,964)
1991	100.0%	46.7%	53.3%	78.2%	36.7%	41.5%	9.6%	3.8%	5.8%	4.7%	2.2%	2.6%	7.5%	3.9%	3.5%
	(6,787,387)	(3,169,093)	(3,618,294)	(5,308,923)	(2,493,766)	(2,815,157)	(651,634)	(260,645)	(390,989)	(320,484)	(147,202)	(173,282)	(506,346)	(267,480)	(238,866)
1992	100.0%	46.5%	53.5%	77.1%	36.1%	41.0%	10.0%	4.0%	6.0%	5.0%	2.3%	2.7%	7.9%	4.1%	3.8%
	(6,815,351)	(3,169,670)	(3,645,681)	(5,256,453)	(2,460,090)	(2,796,363)	(678,993)	(272,625)	(406,368)	(342,776)	(156,000)	(186,776)	(537,129)	(280,955)	(256,174)
1993	100.0%	46.4%	53.6%	76.1%	35.6%	40.5%	10.2%	4.1%	6.1%	5.3%	2.4%	2.9%	8.4%	4.3%	4.0%
	(6,758,398)	(3,138,286)	(3,620,112)	(5,140,077)	(2,404,105)	(2,735,972)	(691,358)	(277,407)	(413,951)	(361,272)	(163,491)	(197,781)	(565,691)	(293,283)	(272,408)
1994	100.0%	46.0%	54.0%	75.1%	34.8%	40.2%	10.4%	4.1%	6.3%	5.7%	2.6%	3.1%	8.8%	4.5%	4.3%
	(6,732,999)	(3,098,952)	(3,634,047)	(5,054,480)	(2,344,654)	(2,709,826)	(702,316)	(277,197)	(425,119)	(385,424)	(173,777)	(211,647)	(590,779)	(303,324)	(287,455)
1995	100.0%	45.6%	54.4%	74.4%	34.2%	40.1%	10.6%	4.1%	6.5%	6.0%	2.7%	3.3%	9.1%	4.6%	4.5%
	(6,739,621)	(3,072,630)	(3,666,991)	(5,011,945)	(2,306,358)	(2,705,587)	(712,207)	(277,092)	(435,115)	(403,613)	(178,970)	(224,643)	(611,856)	(310,210)	(301,646)
Percentage Change															
1990 to 1991	1.0%	0.7%	1.3%	-0.2%	-0.4%	0.1%	4.6%	4.7%	4.6%	6.7%	6.9%	6.6%	6.1%	4.7%	7.6%
1991 to 1992	0.4%	0.0%	0.8%	-1.0%	-1.4%	-0.7%	4.2%	4.6%	3.9%	7.0%	6.0%	7.8%	6.1%	5.0%	7.2%
1992 to 1993	-0.8%	-1.0%	-0.7%	-2.2%	-2.3%	-2.2%	1.8%	1.8%	1.9%	5.4%	4.8%	5.9%	5.3%	4.4%	6.3%
1993 to 1994	-0.4%	-1.3%	0.4%	-1.7%	-2.5%	-1.0%	1.6%	-0.1%	2.7%	6.7%	6.3%	7.0%	4.4%	3.4%	5.5%
1994 to 1995	0.1%	-0.8%	0.9%	-0.8%	-1.6%	-0.2%	1.4%	0.0%	2.4%	4.7%	3.0%	6.1%	3.6%	2.3%	4.9%
Total Change	0.3%	-2.4%	2.7%	-5.8%	-7.9%	-3.8%	14.3%	11.3%	16.4%	34.4%	29.9%	38.2%	28.1%	21.4%	35.9%

Source: Integrated Postsecondary Education Data System (IPEDS)

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Table 5. Change in the distribution of African American and Hispanic undergraduates enrolled at four-year colleges and universities by Carnegie classification: 1984 to 1995

	Total			African American			Hispanic		
	1984	1995	Change	1984	1995	Change	1984	1995	Change
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
	5,877,034	6,480,513	603,479	484,022	663,372	179,350	181,371	376,431	195,060
Research I	23.8%	22.3%	8.5%	16.4%	14.6%	9.7%	25.8%	22.5%	19.5%
	1,399,239	1,450,743	51,504	79,493	96,905	17,412	46,749	84,752	38,003
Research II	8.5%	7.7%	-0.6%	5.3%	4.6%	2.6%	5.0%	5.5%	6.0%
	502,009	498,562	-3,447	25,666	30,305	4,639	9,065	20,775	11,710
Doctoral	15.0%	14.7%	12.4%	14.7%	14.9%	15.5%	14.6%	14.6%	14.6%
	880,925	955,482	74,557	71,032	98,843	27,811	26,531	55,007	28,476
Comprehensive	38.2%	39.2%	49.7%	45.7%	46.5%	48.6%	45.1%	47.2%	49.2%
	2,246,695	2,546,593	299,898	221,148	308,270	87,122	81,768	177,799	96,031
Liberal Arts	14.4%	15.9%	30.0%	17.9%	19.5%	23.6%	9.5%	10.1%	10.7%
	848,166	1,029,133	180,967	86,683	129,049	42,366	17,258	38,098	20,840

Note: Totals do not include students enrolled at specialized four-year colleges and universities.
Source: Integrated Postsecondary Education Data System

Table 6. Change in the distribution of African American and Hispanic undergraduates enrolled at four-year colleges and universities by institutional selectivity: 1984 to 1995

	Number Institutions	Total			African American			Hispanic		
		1984	1995	Change	1984	1995	Change	1984	1995	Change
Total	1,389	100%	100%	100%	100%	100%	100%	100%	100%	100%
		5,814,344	6,455,371	641,027	476,889	670,659	193,770	179,874	372,747	192,873
Most Competitive	48	3.2%	3.1%	1.6%	2.1%	1.8%	1.0%	3.0%	2.7%	2.4%
		190,768	201,259	10,491	10,093	12,053	1,960	5,399	9,976	4,577
Highly Competitive	71	7.1%	6.6%	2.2%	3.4%	3.2%	2.8%	5.4%	6.2%	6.8%
		414,540	428,654	14,114	16,127	21,599	5,472	9,820	22,945	13,125
Very Competitive	222	21.1%	20.3%	14.0%	12.8%	13.2%	14.3%	24.1%	25.5%	26.8%
		1,225,293	1,315,067	89,774	61,113	88,830	27,717	43,314	95,000	51,686
Competitive	640	44.6%	45.2%	50.7%	40.9%	40.1%	38.3%	40.5%	38.8%	37.2%
		2,592,311	2,917,521	325,210	194,877	269,011	74,134	72,806	14,4524	71,718
Less Competitive	290	16.6%	17.0%	20.7%	28.3%	27.3%	24.9%	19.1%	18.9%	18.8%
		963,336	1,095,851	132,515	135,043	183,367	48,324	34,288	70,621	36,333
Noncompetitive	118	7.4%	7.7%	10.7%	12.5%	14.3%	18.7%	7.9%	8.0%	8.0%
		428,096	497,019	68,923	59,636	95,799	36,163	14,247	29,681	15,434

Notes: Totals do not include students enrolled at specialized four-year colleges and universities.
Institutional selectivity defined by Barron's Profile of American Colleges
Definitions:
Most Competitive = high school rank in top 10 percent to 20 percent, gpa of A to B+, median SAT between 625 and 800 (nonrecentered)
Highly Competitive = rank in top 20 percent to 35 percent, gpa of B+ to B, median SAT between 575 and 625 (nonrecentered)
Very Competitive = rank in top 35 percent to 50 percent, gpa no less than B-, median SAT between 525 and 575 (nonrecentered)
Competitive = rank in top 50 percent to 65 percent, median SAT between 450 and 525 (nonrecentered)
Less Competitive = rank in top 65 percent, median SAT below 450 (nonrecentered)
Noncompetitive = high school graduation
Source: Integrated Postsecondary Education Data System

universities overall and for African Americans and Hispanics. Over that eleven year period, comprehensive colleges and universities accounted for 49.7 percent of the increase in total undergraduate enrollment, 48.6 percent of African American enrollment growth, and 49.2 percent of Hispanic enrollment growth.

Persistence and Graduation

Less than one-fourth of individuals who began their postsecondary education at community colleges in 1989/90 had attained an associate's degree (17.5%) or a certificate (5%) at the first institution in which they enrolled by spring 1994, five years after initially enrolling. Table 7 shows that only 17.7 percent of those who began their postsecondary education in a community college in 1989/90 had earned an associate's degree at any institution by 1994 and an additional 6.4 percent had earned a bachelor's degree.

Less than one-half (46.1%) of freshmen who were seeking bachelor's degrees completed a bachelor's degree within five years of their initial enrollment. Table 8 shows that more than one-fourth (27.7%) had earned no degree and were no longer enrolled.

About one-half (47.8%) of 1989 freshmen who were seeking bachelor's degrees had left the persistence track (i.e., transferred to a two-year institution, stopped out, or left without returning) by the spring of 1994. Table 9 shows that about one-third (31.0%) of those who left the persistence track did not return. The most common time to leave the persistence track was during the first year of enrollment (40.6%).

Issues Un-addressed

Additional data and information are needed to address some of the important components of access such as the efficiency of the process, the educational effectiveness of the process and the benefits students acquire as a consequence of attending and completing college. Efficiency might be measured by the rates at which students progress through their college curricula either by average credit hours successfully completed per term of enrollment or length of time from entry to completion of a degree. Educational effectiveness pertains to the learning and skills students acquire while attending college and changes in the attitudes and behaviors of students while attending college. For skills and knowledge acquisition, it is difficult to imagine an adequate means of measurement short of an outcomes examination or other form of cognitive assessment. The non-cognitive components of students' college experiences can be assessed by a survey instrument or questionnaire. The benefits of the higher education process might include short-term and long-term occupational attainment, earnings, and post-baccalaureate educational experiences of students. Equality of access for particular targeted groups can be gauged by whether students make normal progress through the curriculum, acquire the expected knowledge and skills, possess the attitudes and behaviors that are at least the norm for college students, and achieve employment and earnings, and graduate and first-professional educational opportunities that are the norm for college graduates.

Table 7. Degree Attainment of those who Began their Postsecondary Education in Community Colleges in 1989/90 by Race and Sex (weighted sample size in parentheses)

				White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
Enrollment Status 1994	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
First Degree Attained at First Institution in Which Enrolled															
Total* +++	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(966,436)	(471,074)	(495,362)	(755,929)	(371,163)	(384,766)	(82,566)	(37,590)	(44,976)	(98,013)	(50,670)	(47,343)	(29,928)	(11,651)	(18,277)
None	77.5%	81.0%	74.1%	76.7%	80.4%	73.0%	80.4%	81.0%	79.8%	81.9%	86.5%	77.0%	75.2%	74.4%	75.7%
	(748,608)	(381,550)	(367,058)	(579,453)	(298,577)	(280,876)	(66,363)	(30,454)	(35,909)	(80,291)	(43,853)	(36,438)	(22,502)	(8,667)	(13,835)
Certificate	5.0%	4.6%	5.5%	5.2%	4.6%	5.8%	8.1%	8.0%	8.2%	1.1%	0.0%	2.4%	5.0%	12.9%	0.0%
	(48,748)	(21,632)	(27,116)	(39,423)	(17,109)	(22,315)	(6,693)	(3,018)	(3,675)	(1,126)		(1,126)	(1,506)	(1,506)	
Associate's Degree	17.5%	14.4%	20.4%	18.1%	14.9%	21.2%	11.5%	11.0%	12.0%	16.9%	13.5%	20.7%	19.8%	12.7%	24.3%
	(169,080)	(67,892)	(101,188)	(137,052)	(55,477)	(81,575)	(9,510)	(4,118)	(5,392)	(16,597)	(6,818)	(9,779)	(5,921)	(1,479)	(4,442)
Enrollment Status in Spring 1994															
Total* ++ —	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(966,436)	(471,074)	(495,362)	(755,929)	(371,163)	(384,766)	(82,566)	(37,590)	(44,976)	(98,013)	(50,670)	(47,343)	(29,928)	(11,651)	(18,277)
No Degree, Not Enrolled	48.6%	49.5%	47.7%	49.7%	50.1%	49.3%	53.9%	55.2%	52.8%	39.5%	47.3%	31.2%	34.9%	21.8%	43.3%
	(469,472)	(233,236)	(236,236)	(375,795)	(185,977)	(189,819)	(44,495)	(20,764)	(23,731)	(38,737)	(23,961)	(14,776)	(10,445)	(2,535)	(7,910)
No Degree, Enrolled	9.4%	10.2%	8.6%	7.8%	8.5%	7.1%	9.8%	8.3%	11.0%	16.2%	20.0%	12.1%	26.7%	27.4%	26.2%
Less than 4-Year	(90,771)	(48,068)	(42,702)	(58,808)	(31,602)	(27,205)	(8,079)	(3,119)	(4,960)	(15,895)	(10,152)	(5,743)	(7,990)	(3,195)	(4,795)
No Degree, Enrolled	5.0%	6.6%	3.5%	5.3%	7.1%	3.4%	3.7%	0.0%	6.8%	4.2%	6.0%	2.4%	4.9%	12.6%	0.0%
Four-Year Institution	(48,465)	(31,000)	(17,465)	(39,774)	(26,517)	(13,257)	(3,065)	-	(3,065)	(4,161)	(3,018)	(1,144)	(1,465)	(1,465)	-
Certificate	12.3%	11.6%	12.9%	11.5%	11.3%	11.7%	16.6%	18.6%	14.9%	15.8%	8.2%	23.9%	8.8%	12.9%	6.2%
	(118,685)	(54,640)	(64,044)	(86,922)	(42,001)	(44,921)	(13,677)	(6,984)	(6,693)	(15,450)	(4,150)	(11,301)	(2,636)	(1,506)	(1,130)
Certificate, Enrolled	0.6%	0.6%	0.6%	0.8%	0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Four-Year Institution	(6,056)	(2,946)	(3,111)	(6,056)	(2,946)	(3,111)	-	-	-	-	-	-	-	-	-
Associate's Degree	13.5%	12.1%	14.8%	14.2%	12.7%	15.7%	8.3%	11.0%	6.1%	12.0%	11.2%	12.9%	14.8%	0.0%	24.3%
	(130,594)	(57,049)	(73,546)	(107,497)	(47,230)	(60,267)	(6,863)	(4,126)	(2,737)	(11,792)	(5,692)	(6,099)	(4,442)	-	(4,442)
Associate's Degree, Enrolled	4.2%	3.7%	4.6%	4.1%	3.3%	5.0%	4.5%	6.9%	2.5%	4.0%	2.7%	5.5%	4.9%	12.7%	0.0%
Four-Year Institution	(40,323)	(17,517)	(22,806)	(31,149)	(12,096)	(19,053)	(3,738)	(2,597)	(1,141)	(3,958)	(1,346)	(2,612)	(1,479)	(1,479)	-
Bachelor's Degree	6.4%	5.7%	7.2%	6.6%	6.1%	7.1%	3.2%	0.0%	5.9%	8.2%	4.6%	12.0%	4.9%	12.6%	0.0%
	(62,070)	(26,618)	(35,452)	(49,928)	(22,794)	(27,134)	(2,650)	-	(2,650)	(8,021)	(2,352)	(5,669)	(1,472)	(1,472)	-

Note: *** Test of statistical significance compares African Americans with Whites. *** $p < .001$, ** $p < .01$, * $p < .05$

+++ Test of statistical significance compares White Men with White Women. +++ $p < .001$, ++ $p < .01$, + $p < .05$

—— Test of statistical significance compares African American Men with African American Women. —— $p < .001$, — $p < .01$, ~ $p < .05$

Tests of statistical significance calculated using adjusted sample weight to control for influence of large sample sizes.

Note: Sample includes U. S. citizens only. " - " indicates sample size too small to estimate

Source: Beginning Postsecondary Student Survey, Second Follow-up (1994).

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Table 8. Degree Attainment by May 1994 Among Beginning Postsecondary Students Seeking a Bachelor's Degree in 1989/90 by Race and Sex (weighted sample size in parentheses)

Degree Attainment	Total	White, Not Hispanic		African American, Not Hispanic			Hispanic			Other		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Students												
Total** +++	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(1,101,865)	(545,248)	(556,617)	(893,784)	(455,950)	(437,834)	(82,782)	(30,738)	(52,044)	(71,279)	(34,647)	(36,632)	(54,020)	(23,913)	(30,106)
Attained Bachelor's Degree	46.1%	41.8%	50.3%	48.1%	43.3%	53.1%	34.3%	29.1%	37.3%	30.4%	25.1%	35.4%	51.1%	53.2%	49.4%
	(507,654)	(227,837)	(279,818)	(430,003)	(197,466)	(232,537)	(28,384)	(8,945)	(19,438)	(21,666)	(8,710)	(12,956)	(27,601)	(12,715)	(14,886)
Still Enrolled	18.0%	21.5%	14.6%	17.1%	20.8%	13.2%	19.8%	20.6%	19.4%	24.6%	24.1%	25.2%	22.0%	32.9%	13.3%
	(198,604)	(117,450)	(81,154)	(152,728)	(94,893)	(57,835)	(16,418)	(6,331)	(10,087)	(17,569)	(8,348)	(9,221)	(11,889)	(7,878)	(4,011)
Associate's Degree	4.7%	4.1%	5.2%	4.6%	3.9%	5.4%	6.9%	8.2%	6.2%	3.6%	5.4%	1.9%	2.8%	0.0%	5.0%
	(51,237)	(22,180)	(29,057)	(41,435)	(17,796)	(23,639)	(5,740)	(2,517)	(3,224)	(2,555)	(1,867)	(688)	(1,507)	-	(1,507)
Certificate	3.5%	2.9%	4.1%	3.5%	2.7%	4.3%	3.6%	3.2%	3.9%	5.9%	6.8%	5.2%	1.3%	1.4%	1.3%
	(38,935)	(15,949)	(22,987)	(30,964)	(12,297)	(18,667)	(3,019)	(975)	(2,044)	(4,240)	(2,343)	(1,897)	(713)	(334)	(379)
No Degree, Not Enrolled	27.7%	29.7%	25.8%	26.7%	29.3%	24.0%	35.3%	38.9%	33.1%	35.4%	38.6%	32.4%	22.8%	12.5%	31.0%
	(305,433)	(161,832)	(143,601)	(238,653)	(133,497)	(105,156)	(29,221)	(11,969)	(17,251)	(25,249)	(13,379)	(11,870)	(12,310)	(2,986)	(9,324)
1989/90 Full-Time Students Only												
Total +++	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(859,750)	(428,278)	(431,472)	(720,572)	(370,756)	(349,816)	(60,881)	(19,925)	(40,955)	(38,026)	(18,379)	(19,648)	(40,270)	(19,218)	(21,053)
Attained Bachelor's	51.2%	46.4%	56.0%	52.2%	47.0%	57.7%	40.5%	34.4%	43.5%	45.4%	38.4%	51.8%	55.2%	54.2%	56.1%
	(440,551)	(198,763)	(241,788)	(376,420)	(174,426)	(201,993)	(24,667)	(6,862)	(17,805)	(17,251)	(7,066)	(10,185)	(22,213)	(10,408)	(11,804)
Still Enrolled	17.4%	20.8%	14.0%	16.3%	19.5%	12.9%	22.0%	27.2%	19.4%	25.4%	29.1%	22.0%	22.1%	30.6%	14.4%
	(149,266)	(88,964)	(60,302)	(117,303)	(72,323)	(44,980)	(13,382)	(5,420)	(7,963)	(9,673)	(5,343)	(4,330)	(8,908)	(5,879)	(3,029)
Attained Associate's	4.6%	3.6%	5.5%	4.7%	4.0%	5.5%	4.9%	2.0%	6.4%	1.5%	0.4%	2.6%	3.7%	0.0%	7.2%
	(39,215)	(15,290)	(23,925)	(34,108)	(14,816)	(19,292)	(3,012)	(394)	(2,617)	(588)	(79)	(509)	(1,507)	-	(1,507)
Attained Certificate	2.8%	2.4%	3.1%	2.9%	2.5%	3.4%	4.0%	4.9%	3.5%	0.0%	0.0%	0.0%	1.8%	1.7%	1.8%
	(23,969)	(10,429)	(13,539)	(20,842)	(9,121)	(11,721)	(2,414)	(975)	(1,440)	-	-	-	(713)	(334)	(379)
No Degree, Not Enrolled	24.0%	26.8%	21.3%	23.9%	27.0%	20.5%	28.6%	31.5%	27.2%	27.6%	32.0%	23.5%	17.2%	13.5%	20.6%
	(206,749)	(114,831)	(91,918)	(171,899)	(100,070)	(71,829)	(17,406)	(6,275)	(11,131)	(10,513)	(5,890)	(4,623)	(6,931)	(2,597)	(4,334)

Note: *** Test of statistical significance compares African Americans with Whites. *** $p < .001$, ** $p < .01$, * $p < .05$

+++ Test of statistical significance compares White Men with White Women. +++ $p < .001$, ++ $p < .01$, + $p < .05$

~~~Test of statistical significance compares African American Men with African American Women. ~~~ $p < .001$, ~~ $p < .01$, ~ $p < .05$

Tests of statistical significance calculated using adjusted sample weight to control for influence of large sample sizes.

Note: Sample includes U. S. citizens only. " - " indicates sample size too small to estimate

Source: Beginning Postsecondary Student Survey, Second Follow-up (1994).

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Table 9. Persistence Pattern of 1989/90 Beginning Postsecondary Students who were Seeking Bachelor's Degrees by Race and Sex (weighted sample size in parentheses)

Persistence	White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total*** +++	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(1,101,865)	(545,248)	(556,617)	(893,784)	(455,950)	(437,834)	(82,782)	(30,738)	(52,044)	(71,279)	(34,647)	(36,632)	(54,020)	(23,913)	(30,106)
Did Not Leave	52.2%	48.1%	56.2%	54.2%	49.3%	59.3%	36.1%	34.2%	37.3%	42.8%	37.0%	48.2%	55.7%	59.3%	52.9%
Persistence Track	(574,881)	(262,187)	(312,693)	(484,396)	(224,700)	(259,696)	(29,895)	(10,498)	(19,397)	(30,474)	(12,803)	(17,671)	(30,116)	(14,187)	(15,929)
Left Persistence Track	47.8%	51.9%	43.8%	45.8%	50.7%	40.7%	63.9%	65.8%	62.7%	57.2%	63.0%	51.8%	44.3%	40.7%	47.1%
	(526,984)	(283,061)	(243,923)	(409,388)	(231,250)	(178,137)	(52,887)	(20,240)	(32,647)	(40,805)	(21,844)	(18,961)	(23,904)	(9,726)	(14,178)
Type of Departure															
Total Left Persistence	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Track +++	(526,984)	(283,061)	(243,923)	(409,388)	(231,250)	(178,137)	(52,887)	(20,240)	(32,647)	(40,805)	(21,844)	(18,961)	(23,904)	(9,726)	(14,178)
Downward Transfer	38.4%	37.3%	39.6%	39.0%	37.3%	41.3%	34.1%	36.1%	32.8%	34.5%	34.1%	34.8%	42.8%	44.9%	41.3%
	(202,140)	(105,468)	(96,671)	(159,822)	(86,328)	(73,494)	(18,037)	(7,316)	(10,720)	(14,060)	(7,457)	(6,603)	(10,221)	(4,367)	(5,854)
Stopout	30.6%	34.1%	26.5%	29.6%	34.1%	23.7%	32.1%	28.5%	34.4%	40.1%	38.0%	42.4%	28.9%	37.4%	23.2%
	(161,333)	(96,660)	(64,673)	(121,080)	(78,950)	(42,130)	(16,989)	(5,769)	(11,220)	(16,345)	(8,307)	(8,037)	(6,920)	(3,633)	(3,286)
Left Without Return	31.0%	28.6%	33.9%	31.4%	28.5%	35.1%	33.8%	35.3%	32.8%	25.5%	27.8%	22.8%	28.3%	17.8%	35.5%
	(163,511)	(80,933)	(82,578)	(128,485)	(65,972)	(62,513)	(17,861)	(7,154)	(10,707)	(10,401)	(6,080)	(4,321)	(6,764)	(1,726)	(5,037)
Academic Year Left Persistence Track															
Total Left Persistence	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Track	(526,984)	(283,061)	(243,923)	(409,388)	(231,250)	(178,137)	(52,887)	(20,240)	(32,647)	(40,805)	(21,844)	(18,961)	(23,904)	(9,726)	(14,178)
Left in 1989/90	40.6%	41.6%	39.5%	39.9%	39.3%	40.8%	47.7%	52.9%	44.5%	53.4%	67.0%	37.7%	15.3%	16.5%	14.4%
	(214,191)	(117,870)	(96,321)	(163,505)	(90,912)	(72,594)	(25,245)	(10,714)	(14,531)	(21,789)	(14,640)	(7,150)	(3,651)	(1,605)	(2,046)
Left in 1990/91	20.8%	22.7%	18.7%	22.6%	24.4%	20.3%	14.5%	17.3%	12.8%	15.6%	9.6%	22.5%	12.9%	22.6%	6.3%
	(109,796)	(64,275)	(45,520)	(92,680)	(56,493)	(36,187)	(7,668)	(3,494)	(4,174)	(6,356)	(2,088)	(4,268)	(3,091)	(2,201)	(891)
Left in 1991/92	25.3%	23.7%	27.3%	24.2%	23.9%	24.7%	23.5%	17.3%	27.4%	18.8%	13.6%	24.8%	59.7%	54.7%	63.1%
	(133,531)	(67,001)	(66,530)	(99,148)	(55,209)	(43,939)	(12,441)	(3,502)	(8,939)	(7,667)	(2,965)	(4,702)	(14,275)	(5,325)	(8,950)
Left in 1992/93	9.1%	8.8%	9.6%	9.5%	9.2%	9.9%	9.2%	9.9%	8.8%	7.3%	6.7%	7.9%	5.7%	1.0%	8.9%
	(48,186)	(24,824)	(23,363)	(38,977)	(21,266)	(17,711)	(4,886)	(2,000)	(2,887)	(2,970)	(1,464)	(1,506)	(1,354)	(94)	(1,259)
Left in 1993/94	4.0%	3.2%	5.0%	3.7%	3.2%	4.3%	5.0%	2.6%	6.5%	5.0%	3.1%	7.0%	6.4%	5.2%	7.3%
	(21,280)	(9,090)	(12,190)	(15,077)	(7,371)	(7,706)	(2,646)	(530)	(2,116)	(2,023)	(687)	(1,336)	(1,533)	(501)	(1,032)

Note: *** Test of statistical significance compares African Americans with Whites. *** $p < .001$, ** $p < .01$, * $p < .05$

+++ Test of statistical significance compares White Men with White Women. +++ $p < .001$, ++ $p < .01$, + $p < .05$

~~~Test of statistical significance compares African American Men with African American Women. ~~~ $p < .001$, ~~ $p < .01$, ~ $p < .05$

Tests of statistical significance calculated using adjusted sample weight to control for influence of large sample sizes.

Note: Sample includes U. S. citizens only. " - " indicates sample size too small to estimate.

Source: Beginning Postsecondary Student Survey, Second Follow-up (1994).

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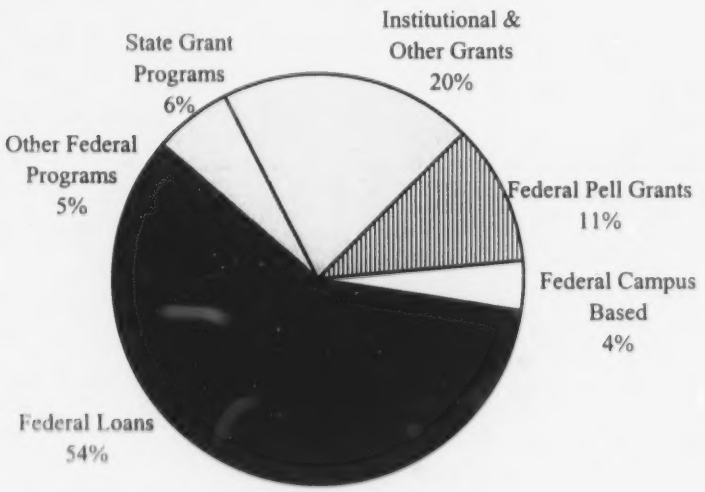
Financial Aid

Financial aid programs authorized under Title IV of the Higher Education Act are the primary vehicle through which the national government attempts to expand student access to college. Today about $37 billion is awarded annually under federal financial aid programs, representing 74 percent of all college financial aid awarded to students from all sources. Figure 2 illustrates the distribution of financial aid from all sources for the academic year 1995-1996. Of the $50 billion in financial aid that students relied upon in 1995-96 from all sources, Figure 2 reveals that federal loans accounted for the largest share (54%) followed by institutional and other related aid (20%), Pell Grants (11%), state grants (6%), campus based programs (4%), and other federal specially targeted programs (5%). While some of campus based financial aid is awarded on the basis of merit, the vast share is need-based aid designed primarily to expand access to college for students whose personal financial circumstances might otherwise be an impediment to college entry and persistence.

Figure 2. Distribution of Financial Aid Awarded to Postsecondary Education Students: 1995/96


Institutional & Other Grants 20%
State Grant Programs 6%
Other Federal Programs 5%
Federal Pell Grants 11%
Federal Campus Based 4%
Federal Loans 54%

Source: Trends in Student Aid: 1986 to 1996, The College Board, 1996

In 1995/96, 4.674 million subsidized Stafford loans were awarded to postsecondary education students under either the Federal Family Education Loan Program (3.19 million) or the Ford Direct Loan Program (1.484 million). Table 10 shows that an addition 2.45 million unsubsidized loans were also awarded. About 3.6 million students received an average Pell grant of $1,502.

Table 10. Number of Financial Aid Recipients and Average Award: 1995/96

Type of Aid	Total Number of Recipients	Average Amount Per Recipient
Federal Pell Grant	3,600,000	$1,502
Federal Campus Based Aid		
College Work Study	709,000	$864
Federal SEOG	984,000	$588
Federal Perkins Loan	776,000	$1,233
Federal Family Education Loan Program		
Stafford Subsidized	3,190,000	$3,461
Stafford Unsubsidized	1,697,000	$3,685
PLUS	282,000	$5,819
Ford Direct Loan Program		
Stafford Subsidized	1,484,000	$3,444
Stafford Unsubsidized	753,000	$3,376
PLUS	144,000	$5,515

Source: Trends in Student Aid, The College Board, 1996

About one-half (51.7%) of all undergraduates enrolled at four-year colleges and universities in the fall of 1992 received some type of financial aid. Table 11 shows that grants are the most common type of aid, received by 42.5 percent of all undergraduates attending four-year institutions. About one-third (30.0%) of all undergraduates received loans and 9.4 percent received work study. About one-fifth (22.7%) of all undergraduates received Pell grants and one-fifth (21.7%) received institutional sources of aid.

Some of the important challenges to the current financial aid programs for which data are available to monitor are the following:

- The declining purchasing power of the financial aid awards that students presently receive;
- The high rates of default in the loan programs;
- The rates of attrition among grant and loan recipients;
- Academic preparation for college, and academic performance in college; and
- The debt burden of college graduates.

Table 11. Types and Sources of Aid Received by Undergraduates at Four-Year Colleges and Universities by Race and Sex: Fall 1992 (weighted sample size in parentheses)

				White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
Type and Source of Aid	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(6,707,220)	(3,110,121)	(3,597,099)	(5,430,979)	(2,567,687)	(2,863,292)	(648,478)	(258,000)	(390,478)	(402,073)	(171,171)	(230,902)	(225,690)	(113,263)	(112,427)
Any Aid***	51.7%	51.1%	52.2%	49.3%	49.1%	49.4%	66.3%	64.8%	67.3%	65.3%	63.0%	67.0%	43.8%	46.4%	41.2%
	(3,468,360)	(1,588,953)	(1,879,407)	(2,676,739)	(1,261,294)	(1,415,445)	(430,182)	(167,249)	(262,933)	(262,493)	(107,824)	(154,669)	(98,946)	(52,586)	(46,360)
Merit-Based*	10.3%	10.7%	10.0%	10.8%	11.0%	10.6%	9.5%	10.8%	8.7%	6.5%	7.5%	5.7%	7.9%	7.8%	7.9%
	(690,816)	(332,608)	(358,208)	(585,451)	(283,042)	(302,409)	(61,586)	(27,800)	(33,786)	(25,995)	(12,885)	(13,110)	(17,784)	(8,881)	(8,903)
Grants***	42.5%	41.4%	43.4%	39.6%	39.0%	40.2%	57.4%	55.8%	58.5%	59.4%	56.9%	61.3%	37.4%	38.3%	36.4%
	(2,848,355)	(1,287,341)	(1,561,014)	(2,152,456)	(1,002,527)	(1,149,929)	(372,507)	(143,970)	(228,537)	(239,031)	(97,440)	(141,591)	(84,361)	(43,404)	(40,957)
Loans (Excluding PLUS)*** ~	30.0%	29.6%	30.4%	29.0%	28.9%	29.1%	42.7%	40.4%	44.2%	25.6%	25.4%	25.7%	26.1%	27.5%	24.7%
	(2,013,877)	(921,336)	(1,092,541)	(1,575,567)	(742,530)	(833,037)	(276,622)	(104,132)	(172,490)	(102,782)	(43,536)	(59,246)	(58,906)	(31,138)	(27,768)
Work Study*** + —	9.4%	8.7%	10.0%	8.6%	8.2%	9.0%	16.0%	13.5%	17.7%	8.9%	7.7%	9.8%	10.2%	10.7%	9.7%
	(630,115)	(270,471)	(359,644)	(467,516)	(210,278)	(257,238)	(103,748)	(34,822)	(68,926)	(35,827)	(13,207)	(22,620)	(23,024)	(12,164)	(10,860)
Any Federal Aid*** —	38.8%	37.7%	39.6%	35.4%	35.1%	35.6%	57.3%	53.8%	59.5%	56.9%	53.3%	59.6%	35.2%	37.4%	33.1%
	(2,599,804)	(1,173,846)	(1,425,958)	(1,920,100)	(901,330)	(1,018,770)	(371,266)	(138,908)	(232,358)	(228,909)	(91,283)	(137,626)	(79,529)	(42,325)	(37,204)
Need-Based Aid*** ++ ——	42.1%	40.4%	43.5%	39.1%	38.1%	40.0%	58.1%	54.1%	60.7%	58.8%	55.4%	61.3%	37.1%	38.5%	35.7%
	(2,821,283)	(1,257,067)	(1,564,216)	(2,124,589)	(979,213)	(1,145,376)	(376,564)	(139,492)	(237,072)	(236,436)	(94,794)	(141,642)	(83,694)	(43,568)	(40,126)
Title IV*** —	38.5%	37.4%	39.5%	35.1%	34.8%	35.4%	57.1%	53.4%	59.5%	56.9%	53.3%	59.5%	34.9%	37.4%	32.3%
	(2,583,794)	(1,164,304)	(1,419,490)	(1,906,213)	(892,989)	(1,013,224)	(370,144)	(137,707)	(232,437)	(228,774)	(91,283)	(137,491)	(78,663)	(42,325)	(36,338)
Pell Grant*** ——	22.7%	21.5%	23.7%	18.6%	18.3%	18.8%	42.9%	38.9%	45.6%	46.6%	43.4%	48.9%	20.3%	21.3%	19.3%
	(1,519,951)	(667,889)	(852,062)	(1,008,513)	(469,079)	(539,434)	(278,306)	(100,304)	(178,002)	(187,322)	(74,346)	(112,976)	(45,810)	(24,160)	(21,650)
Institutional*	21.7%	21.6%	21.8%	21.5%	21.4%	21.5%	23.4%	23.3%	23.5%	22.2%	21.1%	23.1%	22.1%	22.2%	21.9%
	(1,457,048)	(671,867)	(785,181)	(1,166,081)	(550,478)	(615,603)	(151,722)	(60,030)	(91,692)	(89,460)	(36,186)	(53,274)	(49,785)	(25,173)	(24,612)
State*** ++ —	15.3%	14.3%	16.2%	14.3%	13.6%	15.0%	20.4%	17.6%	22.2%	21.2%	19.1%	22.8%	12.9%	14.2%	11.5%
	(1,025,418)	(444,076)	(581,342)	(778,985)	(349,858)	(429,127)	(132,059)	(45,482)	(86,577)	(85,294)	(32,624)	(52,670)	(29,080)	(16,112)	(12,968)

Note: *** Test of statistical significance compares African Americans with Whites. *** $p < .001$, ** $p < .01$, * $p < .05$
+++ Test of statistical significance compares White Men with White Women. +++ $p < .001$, ++ $p < .01$, + $p < .05$
——Test of statistical significance compares African American Men with African American Women. —— $p < .001$, — $p < .01$, ~ $p < .05$
Tests of statistical significance calculated using adjusted sample weight to control for influence of large sample sizes
Note: Sample limited to U. S. citizens enrolled in Fall 1992 only
Source: National Postsecondary Student Aid Study: 1992/93

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The Declining Value of Financial Aid Dollars

Over the past decade, the average cost of attending college in the United States increased at a faster rate than average financial aid awards and disposable personal income. Table 12 shows that, between 1986 and 1995, tuition and fees increased by 89 percent at private four-year colleges and universities, from $6,581 to $12,432, and by 123 percent at public four-year colleges and universities, from $1,285 to $2,860. During the same ten-year period, the average Pell grant increased by 16 percent from $1,294 to $1,502 and the average subsidized Stafford Loan by 45 percent from $2,381 to $3,461. The average College Work Study award declined by 5 percent from $912 to $864. Average disposable income rose by only 52 percent from $13,000 to $19,729 (The College Board, 1996) Table 13 shows that, in constant dollars, the value of the average Pell award declined by 16 percent from $1,773 to $1,482. The extent to which this decline in the purchasing power of Pell grants has affected access for students who are on the economic margin is unknown and the important data for knowing do not exist in our national arsenal of data and information. Also unknown is the important question of how the decline in the relative value of financial aid affects the quality and price of college that students are able to afford to attend.

Table 12. Changes in Tuition, Personal Income, and Financial Aid Awards: 1986-87 to 1995-96 (current dollars)

	Tuition and Fees				Financial Aid		
Year	Private Four-Year	Public Four-Year	Public Two-Year	Disposable Personal Income	Pell Grant	College Work Study	Stafford Subsidized
1986-87	$6,581	$1,285	$657	$13,000	$1,294	$912	$2,381
1995-96	$12,432	$2,860	$1,387	$19,729	$1,502	$864	$3,461
Percent Change	89%	123%	111%	52%	16%	-5%	45%

Source: Trends in Student Aid: 1986 to 1995, The College Board, 1996.

Table 13. Changes in Tuition, Personal Income, and Financial Aid Awards: 1986-87 to 1995-96 (constant dollars)

	Tuition and Fees				Financial Aid		
Year	Private Four-Year	Public Four-Year	Public Two-Year	Disposable Personal Income	Pell Grant	College Work Study	Stafford Subsidized
1986-87	$9,016	$1,761	$900	$18,082	$1,773	$1,250	$3,261
1995-96	$12,264	$2,821	$1,368	$19,729	$1,482	$852	$3,414
Percent Change	36%	60%	52%	9%	-16%	-32%	5%

Source: Trends in Student Aid: 1986 to 1995, The College Board, 1996.

Loan Defaults

The National Commission on Responsibilities for Financing Postsecondary Education (1993) reported that over one-million borrowers default on more than $3 billion in a given year. This is about 15 percent of the money borrowed in a given year. According to that Commission, the percent of proprietary institution students who default (48%) is four times higher than the percent of four-year college students (12%) who default. The impact of default

upon the resources available to prospective students has not been approximated. The extent to which the educational, social, economic, and occupational status of those who drop-out compared with those who complete degrees is important but unknown. It is also important to examine the impact of the loan forgiveness provisions that are a part of some loan programs upon promoting greater student access to college.

The Drop-Out Rate of Grant Recipients

The percentage of 1989/90 beginning postsecondary students who were seeking bachelor's degrees and who attained bachelor's degrees within five years of initially enrolling was comparable for those who did (43.6%) and those who did not receive (46.6%) Pell grants during 1989/90. Table 14 shows that dropout rates are higher for Pell grant recipients than for non-recipients (34.8% versus 26.1%). Bachelor's degree attainment rates are higher for 1989 freshmen who received any type or amount of grant than for freshmen who received no grants (55.6% versus 39.4%) and for freshmen who received any type or amount of loans than for freshmen who received no loans (57.6% versus 42.7%).

The Criteria for Receiving Financial Aid

About four-fifths (81%) of all financial aid awarded to undergraduates attending U.S. four-year colleges and universities in fall 1992 was need based and one-fifth was awarded based on academic merit without consideration of financial need. Table 11 shows that approximately 10 percent of all undergraduates attending four-year colleges and universities received financial aid based on academic merit and 42 percent received financial aid based on need.

The Debt Burden of College Graduates

There are several sources of data about the financial indebtedness/debt burden of college graduates. The average amount of undergraduate indebtedness held by 1992/93 bachelor's degree recipients who borrowed any amount during their undergraduate experiences was $9,068. The College Board (1997) now estimates that this amount increased to approximately $13,000 for 1996. These data need to be refined to show the debt burdens by such demographics of the population as socioeconomic status, age and race, as well as major field.

In order to adequately evaluate the effectiveness of financial aid programs toward both reforming policy and expanding access and opportunity, the following questions need to be addressed:

- What contributions have financial aid policies and programs made toward eliminating the disadvantaged status of financial aid recipients?
- What types or combinations of aid lead to the greatest access and what types and combinations are impediments to access for various targeted populations of students?

Table 14. Percent of 1989/90 Beginning Postsecondary Students who were Seeking Bachelor's Degrees who Completed Bachelor's Degrees by Spring 1994 by Financial Aid Received, Race, and Sex (weighted sample size in parentheses)

Degree Attainment	Total	Male	Female	White, Not Hispanic			African American, Not Hispanic			Hispanic			Other		
				Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
No Pell Grant in 1989/90* +++**	100.0% (902,032)	100.0% (465,289)	100.0% (436,743)	100.0% (756,085)	100.0% (395,715)	100.0% (360,371)	100.0% (47,891)	100.0% (21,143)	100.0% (26,748)	100.0% (53,533)	100.0% (28,262)	100.0% (25,271)	100.0% (44,523)	100.0% (20,169)	100.0% (24,353)
Attained Bachelor's	46.6% (420,431)	42.1% (195,684)	51.5% (224,747)	48.8% (369,345)	43.9% (173,713)	54.3% (195,632)	31.0% (14,844)	26.7% (5,647)	34.4% (9,196)	27.2% (14,582)	21.9% (6,183)	33.2% (8,399)	48.7% (21,661)	50.3% (10,140)	47.3% (11,520)
No Degree, Not Enrolled	26.1% (235,867)	28.6% (133,076)	23.5% (102,791)	25.2% (190,403)	27.9% (110,378)	22.2% (80,025)	36.1% (17,297)	45.4% (9,604)	28.8% (7,693)	35.2% (18,852)	38.9% (10,999)	31.1% (7,853)	20.9% (9,314)	10.4% (2,095)	29.6% (7,219)
Received Pell Grant in 1989/90	100.0% (199,833)	100.0% (79,959)	100.0% (119,874)	100.0% (137,698)	100.0% (60,235)	100.0% (77,463)	100.0% (34,891)	100.0% (9,595)	100.0% (25,296)	100.0% (17,747)	100.0% (6,385)	100.0% (11,362)	100.0% (9,497)	100.0% (3,744)	100.0% (5,753)
Attained Bachelor's	43.6% (87,223)	40.2% (32,152)	45.9% (55,071)	44.1% (60,659)	39.4% (23,753)	47.6% (36,905)	38.8% (13,540)	34.4% (3,298)	40.5% (10,242)	39.9% (7,084)	39.6% (2,527)	40.1% (4,557)	62.5% (5,940)	68.8% (2,574)	58.5% (3,366)
No Degree, Not Enrolled	34.8% (69,567)	36.0% (28,757)	34.0% (40,810)	35.0% (48,250)	38.4% (23,119)	32.4% (25,131)	34.2% (11,924)	24.7% (2,366)	37.8% (9,558)	36.0% (6,397)	37.3% (2,381)	35.4% (4,017)	31.5% (2,996)	23.8% (891)	36.6% (2,105)
No Grants in 1989/90* +++**	100.0% (649,554)	100.0% (345,908)	100.0% (303,646)	100.0% (541,365)	100.0% (292,910)	100.0% (248,455)	100.0% (32,162)	100.0% (13,866)	100.0% (18,297)	100.0% (41,615)	100.0% (23,814)	100.0% (17,801)	100.0% (34,412)	100.0% (15,319)	100.0% (19,093)
Attained Bachelor's	39.4% (256,071)	34.6% (119,704)	44.9% (136,368)	41.5% (224,463)	36.2% (106,158)	47.6% (118,304)	22.5% (7,235)	16.8% (2,332)	26.8% (4,903)	22.5% (9,369)	13.7% (3,252)	34.4% (6,117)	43.6% (15,005)	52.0% (7,962)	36.9% (7,043)
No Degree, Not Enrolled	29.0% (188,370)	31.6% (109,356)	26.0% (79,014)	28.1% (151,988)	31.0% (90,920)	24.6% (61,068)	39.4% (12,675)	49.3% (6,836)	31.9% (5,839)	36.7% (15,265)	42.8% (10,192)	28.5% (5,073)	24.5% (8,442)	9.2% (1,408)	36.8% (7,035)
Received Grants in 1989/90**	100.0% (452,310)	100.0% (199,340)	100.0% (252,971)	100.0% (352,419)	100.0% (163,040)	100.0% (189,378)	100.0% (50,620)	100.0% (16,872)	100.0% (33,748)	100.0% (29,665)	100.0% (10,833)	100.0% (18,831)	100.0% (19,607)	100.0% (8,594)	100.0% (11,013)
Attained Bachelor's	55.6% (251,583)	54.2% (108,133)	56.7% (143,450)	58.3% (205,541)	56.0% (91,308)	60.3% (114,233)	41.8% (21,149)	39.2% (6,614)	43.1% (14,535)	41.5% (12,297)	50.4% (5,458)	36.3% (6,839)	64.2% (12,596)	55.3% (4,752)	71.2% (7,844)
No Degree, Not Enrolled	25.9% (117,064)	26.3% (52,477)	25.5% (64,587)	24.6% (86,665)	26.1% (42,577)	23.3% (44,088)	32.7% (16,546)	30.4% (5,133)	33.8% (11,413)	33.7% (9,985)	29.4% (3,187)	36.1% (6,797)	19.7% (3,868)	18.4% (1,579)	20.8% (2,289)
No Loans in 1989/90* +++**	100.0% (853,752)	100.0% (428,301)	100.0% (425,452)	100.0% (696,693)	100.0% (360,805)	100.0% (335,888)	100.0% (53,944)	100.0% (20,655)	100.0% (33,290)	100.0% (60,470)	100.0% (29,736)	100.0% (30,734)	100.0% (42,644)	100.0% (17,105)	100.0% (25,539)
Attained Bachelor's	42.7% (364,812)	38.2% (163,756)	47.3% (201,056)	45.0% (313,478)	40.1% (144,609)	50.3% (168,869)	30.0% (16,191)	23.7% (4,889)	34.0% (11,302)	26.9% (16,249)	19.8% (5,879)	33.7% (10,370)	44.3% (18,893)	49.0% (8,379)	41.2% (10,515)
No Degree, Not Enrolled	28.6% (243,870)	30.2% (129,510)	26.9% (114,360)	27.2% (189,600)	29.4% (106,229)	24.8% (83,372)	39.1% (21,086)	46.3% (9,555)	34.6% (11,530)	36.4% (22,036)	40.0% (11,902)	33.0% (10,134)	26.1% (11,148)	10.7% (1,825)	36.5% (9,324)
Received Loans in 1989/90°	100.0% (248,112)	100.0% (116,947)	100.0% (131,165)	100.0% (197,090)	100.0% (95,145)	100.0% (101,945)	100.0% (28,838)	100.0% (10,083)	100.0% (18,755)	100.0% (10,809)	100.0% (4,911)	100.0% (5,898)	100.0% (11,375)	100.0% (6,808)	100.0% (4,567)
Attained Bachelor's	57.6% (142,843)	54.8% (64,081)	60.0% (78,762)	59.1% (116,526)	55.6% (52,857)	62.5% (63,668)	42.3% (12,193)	40.2% (4,057)	43.4% (8,136)	50.1% (5,417)	57.6% (2,831)	43.8% (2,586)	76.6% (8,708)	63.7% (4,336)	95.7% (4,372)
No Degree, Not Enrolled	24.8% (61,563)	27.6% (32,322)	22.3% (29,241)	24.9% (49,053)	28.7% (27,269)	21.4% (21,784)	28.2% (8,135)	23.9% (2,414)	30.5% (5,721)	29.7% (3,213)	30.1% (1,477)	29.4% (1,736)	10.2% (1,162)	17.1% (1,162)	0.0% -

Note: *** Test of statistical significance compares African Americans with Whites. *** $p < .001$, ** $p < .01$, * $p < .05$

+++ Test of statistical significance compares White Men with White Women. +++ $p < .001$, ++ $p < .01$, + $p < .05$

—Test of statistical significance compares African American Men with African American Women. — $p < .001$, – $p < .01$, - $p < .05$

Tests of statistical significance calculated using adjusted sample weight to control for influence of large sample sizes

Note: Sample includes U. S. citizens only. " - " indicates sample size too small to estimate.

Source: Beginning Postsecondary Student Survey, Second Follow-up (1994).

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- Are economically disadvantaged students receiving sufficient support to attend the most prestigious and most expensive colleges and universities for which they are academically qualified?

- Do the present structures of financial aid and other policies and programs provide adequate incentives and rewards to encourage students to complete their curricula and receive a degree? and

- What are the individual and social benefits to the states' and the nation for their investment in financial aid to college students?

These are the most important policy questions, yet data and information do not exist in current national data bases to adequately address them.

College and University Admissions Policies

Competitive Colleges and Universities

Beyond the campus-based financial aid that institutions award to students, individual colleges and universities also play a vital role in determining access, primarily through their admissions process, but also through the efforts they make to ensuring that students have successful collegiate experiences. Table 6 reveals the substantial underrepresentation of African Americans attending the colleges and universities with the most competitive admissions standards and their overrepresentation among students attending the less selective and noncompetitive colleges and universities. Only 1.8 percent of African Americans attend the most competitive colleges and universities, 3.2 percent attend highly competitive colleges and universities, 13.2 percent attend very competitive institutions and 42 percent attend less competitive and noncompetitive institutions combined. This compares to a total enrollment distribution of 3.1 percent attending the most competitive, 6.6 percent attending highly competitive, 20.3 percent attending very competitive institutions, and only 25 percent attending less competitive and noncompetitive institutions combined. Unlike African Americans, the Hispanic distribution on the competitiveness of institution scale more closely resembles that of the overall distribution of students. The following are two questions that need to be addressed about the college admissions process as it pertains to increasing access:

- Are college and university admissions policies sufficiently flexible to admit talented students from a variety of racial/ethnic and socioeconomic status backgrounds who demonstrate merit in a variety of ways? and

- Do colleges and universities carry out appropriate validity studies to ensure that the criteria used in selecting students for admissions are equally valid across racial/ethnic group and socioeconomic class?

Conclusions

Although the nation has made enormous strides improving data and information on higher education over the past two decades, much more is needed in order to measure progress and evaluate policies and programs that are designed to increasing student access This paper has

presented a view of access to college that ranges from pre-collegiate academic preparation through the post-collegiate consequences of attending college. Much of the nation's policies, as well as the progress being made in achieving greater student access, are not dependent upon the quality of data or research. But, improvements to the nation's access policies, developing models of policies and programs to improve efficiency and effectiveness, and increasing our understanding of both the progress and the factors that contribute to the progress are dependent upon improving both our data and research.

The following are four of the most important issues for which new data and research are needed toward improving access to higher education.

- Are the learning and development outcomes different for economically disadvantaged and underrepresented minority students for attending different colleges and universities?

- Are the Pell Grant, Stafford Loan and other national financial aid programs appropriately constructed to yield the greatest access for economically disadvantaged and underrepresented minority students?

- Are college and university admissions policies and standards appropriate and valid for yielding greater access and achievement for economically disadvantaged and underrepresented minority students?

- Are there differential social and economic benefits for economically disadvantaged and underrepresented minority students for attending and graduating from different types of colleges and universities?

ACCESS IN A DEMOCRACY: NARROWING THE OPPORTUNITY GAP

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In an era where obsession with conflict appears to preclude the ability to focus on solutions, the concept of "access" has entered the realm of the great American debates. Known as "culture wars," these debates divide individuals who have fundamentally different views of the world. According to James Hunter (1991) the nature of politics in America is rooted in divisions between "orthodox" and "progressive" tendencies. The orthodox believe certain truths are unchangeable and nonnegotiable. However, progressivists believe moral truths are not fixed, but perpetually unfolding. Education has become one of the great battlegrounds on which culture wars are being fought, as exemplified in the controversy over public school reform and the issues of multi-culturalism and Affirmative Action in higher education (Nolan, 1996; Yamane, 1996).

With regard to access, there are two opposite extremes. One side of the cleavage is fueled by a powerful strain of individualism that pervades American society. This is a color-blind, meritocratic view that emphasizes individual freedom to succeed or fail under universally agreed standards of merit. The opposing side is a collectivist view formulated around the sharing of wealth and power. This position is championed by those who are committed to resymbolizing, reconstructing, and refashioning access based on contemporary social realities such as the diversification of society and the preservation of equal opportunity for the disadvantaged.

These two contrasting philosophical orientations about access–one based on merit and the other on social justice and equal opportunity–are competing over who gains access and ultimately who will comprise the contemporary American college student body. There are, of course, some areas of overlap between the two positionalities (i.e., both sides believe they are pursuing justice and fairness). However, I will employ the opposing views to shape the discussion of: 1) what access means and whether common definitions are adequate; 2) whether the concept of access needs to be reconceptualized and what a new definition would look like; and 3) the implications of this new definition on policy setting and data collection at the local, state, and national levels.

I. Common Access Definitions

"Access" is connected with numerous terms in American higher education.

Access Definitions Connected to Merit

Access based on merit is connected to the view that the "American Dream" is alive and well and that the dream can be sustained by protecting individualistic ideals that permeate American history and folklore. Access as a meritocratic ideal holds that individuals who work hard and succeed on their own will become the "best and the brightest" who will be rewarded with full opportunity for obtaining the best education, resulting in access to political power and social status. Access as merit holds that color-

blind–college admission is based solely on qualifications, not race. This conservative view plays out in at least three ways in American higher education.

Access as an Academic Index. Most colleges and universities have an index by which they assess the extent that an individual is qualified for access. For example, at selective institutions, the Academic Index is based on high school grade point average and a standardized test score, usually the SAT or the ACT. The Academic Index is designed to ensure that, at a time when the admission bar is being raised, only those students who meet at least the university's minimum qualifications may be considered college-eligible.

Access as Course Entry Standards. Several institutions have imposed tougher admission standards based on additional course units. For example, the Arizona Board of Regents tightened its admission standards for its three universities (Arizona State University, The University of Arizona, and Northern Arizona University) to require additional units of math and fine arts. Beginning Fall 1998, students applying to these universities will need to have four years of English and math, three years of laboratory science, two years of social studies, two years of foreign language, and one year of fine arts. Students who excel in these college-prep courses are likely to fare well in the competitive admissions process. College-bound students in Arizona can also expect stricter standardized test requirements. Regents want to increase the minimum ACT scores from 20 to 24 and SAT scores from 520 to 540.

Access as College Choice. Some would argue that the U.S. already has nearly universal access and that students, regardless of academic qualifications, can choose among diverse institutions. For example, the California Master Plan for Higher Education is the state's attempt to provide public higher education to all who desire it. While the 1988 review of the Master Plan makes it clear that all segments of higher education should strive to approximate the general ethnic, gender, academic, and regional composition of high school graduates, merit plays a key part in this hierarchical plan which has been criticized for reproducing inequalities (Brint & Karabel, 1989). Only the most exceptionally qualified students (the top 12.5 percent of high school graduates) are eligible to enroll in the highest tier, the University of California. The middle tier is the California State University. Community colleges are found at the bottom of the hierarchy, with open admissions policies catering to students needing remedial work, having low GPA's and standardized test scores, wanting less than a four-year college degree, and/or preparing for the job market. However, two-year colleges have been criticized for having low retention and transfer rates to four-year institutions, a sad state of affairs for Latinos and American Indians who are differentially clustered in community colleges (Brint & Karabel, 1989).

Throughout the nation access options are also readily available in terms of cost, size, programs offered, control, degree of research or teaching activity, eligibility requirements, and mission. Adelman (1997) notes that missions can be population-driven such as women's colleges, as well as institutions that cater to specific clienteles such as Historically Black Colleges and Universities (HBCU's), Hispanic Serving Institutions (HSI's) and American Indian tribal colleges. Missions can also be sponsorship-driven such as religious or military, or curricular, such as mining, technology, and fine arts. If access is so widely available, then why the controversy?

I believe that the reason access is generating attention is based on three issues. First, even the President of the United States recognizes that we are becoming a multicultural nation and that we ought to find ways to expand opportunities to subordinated groups. Second, we are being challenged to develop a vision of a culturally pluralist society–one that can share wealth and power in a way that no community or class is systematically subordinated. Third, Americans know that greater wealth is found

in "A" list institutions and in graduate and professional schools, and these are the very places where the most heated access culture wars are being fought. The latter is not a minor point for students who have been historically underrepresented in selective institutions. Being able to make a *real choice* is different than being shunted to certain kinds of institutions. In short, being given a choice is different than actually being able to make a choice. Society does not perceive a degree from an "A" list institution to be quite the same as a degree from a regional, state university or a community college. *At issue is how to provide access opportunities for underrepresented groups not only in lower and middle tier institutions, but in selective colleges and universities. At issue is how to increase the numbers of college-eligible minority students who qualify to enroll in selective institutions and graduate and professional schools.*

Access Definitions Connected to Social Justice and Equal Opportunity

Proponents of social justice and equal opportunity believe that the "American Dream" is a hallucination–realizable only by a privileged class that has early access to cultural and social capital (Bourdieu, 1986). Advocates argue that race-conscious policies are needed to compensate the disadvantaged for past racism, sexism, and other discrimination which continue to plague certain groups in American society. While most Americans would like to be judged by the content of their character, as opposed to the color of their skin, advocates of social justice believe that in order to bring about color-blindness, it is necessary to become temporarily color-conscious. Not only do racial inequalities persist, economic inequalities between majority and minority groups require a substantial amount of time to decrease–Thomas N. Dayment (1980) estimates half a century.

Orfield and Ashkinaze (1990) note that there is a sharp contrast between ghetto/barrio life and middle/upper class life that is not well understood by White society. The future of higher education depends on low-income minority students who are becoming a new majority, especially in urban areas. There are literally thousands of students who grow up in poverty, in environments removed from academics, in areas where hardly anyone they know has gone to college. These students attend poorly funded schools where they get the least of the best that American public schools have to offer. These schools operate with outmoded curricula and structures that assume that only a few students can be successful. Instead of being challenged with high expectations, students engage in mundane tasks and are often tracked into nonacademic programs of study that do not lead to college (Rendón & Hope, 1996).

By the time disadvantaged students finish high school they are likely to have experienced invalidation–told that they will not amount to very much. Many are afraid that they are not "college material" even when they overcome obstacles and perform well in school. Even some straight "A" students are often reluctant to enroll in selective institutions and turn down scholarships to Ivy-League universities outside their state. Many of these students are first-generation, the first in their family even to consider college. For them the transition to college is filled with excitement at having the opportunity to make something of their lives. But the transition is also filled with loss. Students separate from their family and friends, break family codes of unity, learn to live in multiple worlds, and assume a new identity.

The first year of college is critical since dropout rates tend to be higher at this juncture. Some students find the new college environment to be intimidating and difficult to negotiate (i.e., a predominantly White faculty that has little understanding of minority cultures, a Euro-centered curriculum, invalidation, fiercely competitive learning environments, and racism). Consequently, nontraditional students find it difficult to get involved on campus and this impacts retention (Rendón, 1994; Rendón & Hope, 1996; Jalomo, 1995).

For social justice proponents, expanding access for these students is about making fundamental changes in schools and colleges. For example, Sonia Nieto (1996) argues that changing schools requires speaking about transformation rather than simply reform. Nieto advocates that changes are needed in both structures (i.e., policies and practices such as the curriculum, tracking, and teaching) and in individual and collective will to educate students. In higher education, attention to enhancing the first-year experience, fostering validating in- and out-of-class environments, mentoring, and learning communities can make a positive difference (Rendón, 1994; Tinto & Goodsell, 1993).

Access as Affirmative Action. Without question, Affirmative Action is the tool that has opened the door to college for African American, American Indian, Latino, and Asian students. This policy acknowledges that a society with deeply rooted exclusionary practices has to impose proactive strategies to expand opportunity and eliminate discrimination. This includes the consideration of race. However, the use of race was challenged in the *Regents of the University of California v. Bakke* 1978 case. While the Supreme Court upheld the use of race as an acceptable criterion to open the door for the disadvantaged, this door is now closing. In Texas, the March 18, 1996 ruling by the Fifth Circuit Court stated that the University of Texas Law School could not give preferred treatment to minority applicants and that racial preference in admissions was unconstitutional (*Hopwood v. State of Texas)*. Similarly, in 1996, the University of California Board of Regents voted to eliminate race, ethnicity, and gender in the admissions process, as well as in hiring and contracting.

Opponents of Affirmative Action claim that the remedy for past discrimination and lack of opportunity is now ineffective. They cite that it stigmatizes students as less qualified, lowers admission standards to accommodate those who cannot meet admission criteria, and makes these students readily identifiable through the creation of "token" remedies such as remedial education and race-based programming.

Class-Based Access. Proponents of class-based access argue that only the truly disadvantaged, i.e., students from poverty backgrounds (regardless of race/ethnicity) should benefit from preferences. However, a 1990 report issued by the Institute for the Study of Social Change at the University of California, Berkeley cautions that an Affirmative Action strategy based solely on class would cut deeply into the racial diversity of the campus. While at first blush it appears that Blacks would benefit from a class-based strategy because their incomes fall below that of Whites, Blacks constitute only eight percent of the population in California. By contrast, there are seven times more Whites than Blacks and there are actually more Whites in economic distress than Blacks.

Access as Ability to Pay. Even the most qualified student is likely to defer a higher education without appropriate financial resources, but students from low SES backgrounds are differentially impacted. Gladieux (1997) as well as Orfield and Ashkinaze (1991) indicate that economic trends during the 1980s and 1990s reduced college affordability. Federal Pell grants, the essential source of need-based scholarships for low-income students, were increased at a much slower level than the cost of college tuition in the 1980s. Appropriations cuts and fiscal exigencies had the impact of increasing college tuition in both public and private four-year colleges by twice the rate of inflation since 1980.

The increasing gap between aid and college cost has to be filled by job income, family support, and student loans, but this strategy works against low-income students. Gladieux (1997) indicates that family incomes have grown steadily less equal during the 1980s and 1990s. While the share of family income required to pay for college costs has increased for all families, it has gone up most for

those who occupy the bottom tier of the economic ladder. Many low-income families have no reserves to draw on and rely on state and federal policy to gain access to college. But while the real value of total aid available to students from federal, state and institutional sources has increased since 1980, the growth has been primarily in the form of federal loan assistance for even the neediest of students who are often reluctant to secure loans that will exacerbate their family debt.

Access as Improving College Eligibility. Many educators believe that access is an outcome of a long series of academic and social experiences that begin in home environments and in early schooling experiences (Bourdieu, 1994; Rendón & Hope, 1996; Geiser, 1996). By the time students get to the 12th grade, it is too late to improve college-eligibility or to increase the numbers of students who are ready for college. In fact, it could be said that students begin to drop out of college in grade school.

Consequently, one has to cautiously examine reports that access gaps between whites and minorities have dramatically narrowed. For example, college-going rates are often computed using the high school graduation class and do not take into account the dropout rate that occurred at earlier stages. Nor do they consider the extent that high school graduates are college-eligible. Twelfth graders constitute a very select group, especially in depressed urban areas. And while it is true that college-going rates for this select group of high school graduates have improved, one needs to examine the extent that these graduates meet academic admissions criteria at selective colleges and universities.

In a longitudinal study following the progress of 10th graders, Geiser (1996) provides the good and bad news in the University of California (U.C.) system. The good news is the university does reasonably well in attracting and enrolling minority and majority students who become college-eligible. However, the pool of Black and Chicano/Latino college-eligible students is very small due to differential rates of high school graduation and completion of the A-F curriculum. Geiser concludes that "The message is that low eligibility is the fundamental obstacle to broadening participation of groups that are currently underrepresented in the U.C. student body" (p. 12).

In another longitudinal study focused on the City University of New York, Lavin and Hyllegard (1996) found that 12 years or so after students began college, most (73%) had graduated. However, the researchers noted that 77 percent of Whites, but only 56 percent of Blacks and 49 percent of Hispanics who started in CUNY senior colleges as regular or open admissions earned BA's. Accounting for these differences were that nonwhite students came from lower-income families and their parents had less educational attainment. Also, minority students had lower high school GPA's, came from non-academic high school tracks, took more non-credit remedial work, and were employed full-time. The limited English proficiency of Hispanic students was also a factor affecting college completion. The good news here is that most students graduated, but the bad news is that fewer Blacks and Hispanics graduated and that it took 12 years to graduate. One wonders how many working-class students would opt for college if told it would take them roughly 12 years to complete their degree.

A focus on college-eligibility is more than helping 12th graders get into college. It is about expanding the pool of college-eligible students through university outreach strategies that target students in the early grades to instill the idea that college is a viable option and that there are specific requirements that need to be met in order to be eligible to go to college. Nationally, there are literally hundreds of outreach programs. Among the most successful programs include Arizona State University's Hispanic Mother/Daughter Program and Project Prime. In California, the Early Academic Outreach Program (EAOP), the Mathematics, Engineering, and Science Achievement Program (MESA), the Puente Project,

and the University of Southern California's Neighborhood Academic Initiative have successfully increased access for underrepresented students.

Another strategy involves reforming the entire K-16 pathway, involving city-wide collaboration among schools, two- and four-year colleges, business and industry, health systems, the criminal justice system, elected officials, and community-based organizations. These initiatives focus on enhancing the success of students as they traverse the K-16 educational system with an eye toward improving access to higher education and attainment of college degrees. Examples of K-16 initiatives are the Ford Foundation's Urban Partnership Program, the Pew Charitable Trusts Community Compacts Program, and the National Science Foundation's Urban Systemic Initiative.

Access as Alumni Preference or Athletic Ability

Access based on privilege of an alumni relationship or athletic ability has neither a merit nor social justice basis. In a 1990 report produced by the Institute for the Study of Social Change at the University of California, Berkeley, it was noted that Whites and Asians were usually outraged when one of their own was "displaced" by an applicant who was admitted under Affirmative Action. Yet, preferential treatment for selective alumni or talented athletes evoke no such protest. Interestingly, the report notes that: "In American higher education, far more Whites have entered the gates of the ten most elite institutions through 'alumni preference' than all the Blacks and Chicanos together have ever entered through Affirmative Action" (p. 8).

Are Common Definitions Adequate?

Conventional definitions of access have their limitations. For example, merit definitions are primarily concerned with the entry point to college and do not consider either prior schooling inequities or the need to help students succeed after college enrollment. Merit definitions tend to produce winners and losers and competition for college access and degree completion becomes a matter of survival of the fittest. Merit definitions also fail to account for full student potential, for recognizing that one or two criteria do not necessarily define all that an individual can accomplish. Access based on merit differentially benefits students who: come from a privileged background (i.e., a middle- or upper-class family that has a history of college attendance and instills that expectation to children), live in a community where academics are valued and where college graduates are visible, attend well-funded schools, study under teachers who set high expectations, understand what being "college-eligible" means, enroll and pass all college-prep courses, achieve a high college admission test score, and earn a high GPA. As the song says, "God bless the child that's got his own."

In fact, Lani Guinier (1997, June 27) points out that the reason Cheryl Hopwood lost points when she applied to the University of Texas Law School was not because of her race, but because she grew up under difficult circumstances, worked her way through school, and graduated from a less competitive but more affordable college. The Hopwood case exemplifies how a reductionist definition of merit as a test score can work against both Whites and minorities. At every step, differences in educational resources, cultural, and academic experiences screen out thousands of students who might be able to be acceptable or even better lawyers, teachers, physicians, etc. than those who benefit from the test score game. Students like Hopwood want access not only to less selective institutions, but to "A" list colleges and universities that provide a specialized academic wealth that allows them to become a part of American intelligentsia. When given the opportunity, students with ties to subordinated communities are

uniquely positioned to view (and make more intelligible) American culture and politics through a lens that advantaged whites cannot employ.

Access definitions based on a social justice/equal opportunity orientation are more inclusive, but have become confusing and hazy. Some connect Affirmative Action policies to diversity, others to reverse discrimination, and still others to less qualified applicants. Outreach programs have had an impact, but they are largely uncoordinated and not well evaluated. Admission decisions themselves are complex and frequently unknown and/or misunderstood by all but a few administrators and faculty, completely unknown to the typical student, and not well understood by the Regents themselves (Institute for the Study of Social Change, 1990). The example of Berkeley as described by the Institute for Social Change (1990) is a case in point. In the fall of 1989, approximately 21,300 high school graduates applied for 3,500 open spots in the Berkeley freshman class. More than 5,800 of the 21,300 applicants had 4.0 GPA averages. Realistically, regardless of Affirmative Action or merit, 2,300 straight "A" students were going to be turned away at Berkeley. Complicating the matter was that the Berkeley Academic Index pitted Whites against Asians with Asians gaining ground. Another complication was that the median GPA of Black and Chicano/Latino students was 3.5, well above the minimum 3.2 requirement, but .5 points below the median 4.0 of Whites and Asians.

The Berkeley case illuminates the flaws of a merit-based admission strategy and underscores the complexities of a race-conscious Affirmative Action strategy. It raises questions such as: Is a freshman class of only 4.0 students academically and socially desirable? If not, what else should we look for? Is a 4.0 from school A the same as a 4.0 from school B or C? Is a minority student GPA of 3.5 justifiable for displacing a 4.0 student in order to diversify the student body and to preserve opportunity for underrepresented groups? Should having a "mere" 3.5 GPA stigmatize a student? A key problem with both the merit and the Affirmative Action access policy is that access becomes a college entrance issue and completely ignores the fact that thousands of students dropped out of the pipeline long before they even had a chance to complete their high school years.

II. Reconceptualizing Access

I believe that access in American higher education needs both a new definition and a conceptual framework to actualize this definition. Is it possible to find common ground between the merit and the social justice definitions? Hunter (1996) explains that a "culture war cannot be resolved because it is the natural expression of a massive cultural transformation (to what we don't know but over which individuals, institutions, and, least of all, administrators have no control). One cannot resolve it, one can only cope with it. The question individuals, communities and political and cultural gatekeepers alike can address is whether they will seek to deal with it in ways that are at least in keeping with conventions if not the ideals of American democratic life" (p. 254).

The definition of access ultimately boils down to what we choose to value. I believe that viewing access in the context of one of America's most cherished ideals, democracy, can provide a solution. The basis for this view is eloquently articulated by June Jordan (1986, p. 19): "*Demos*, as in democratic, as in democratic state, means people, not person. A democratic nation of persons, of individuals, is an impossibility, and a fratricidal goal. Each American one of us must consciously choose to become a willing and outspoken part of *the people* who, together, will determine our individual chances for happiness, and justice [original italics]." Inherent in a democracy is the principle of

opportunity. *Democratic access* ensures that all students, regardless of social background, race/ethnicity or gender, are provided a fair and equal opportunity to graduate from high school, enter the college of their choice, graduate from college, and enter the graduate or professional program of their choice.

Figure 1 provides an example of a conceptual framework for democratic access. At each stage of the K-college continuum, structural and staff behavioral changes are instituted focusing on building a strong academic foundation and a shared culture of academic achievement. Benchmarks are set and data are collected to document success.

Democratic Access

Democratic access has the following components:

1. **Based on democratic principles.** Because there are students who are not yet equal partners in the educational playing field, there is a need to eradicate barriers to access and preserve opportunities for the disadvantaged. While recognizing and respecting individual talents, the collective success of Americans is the primary focus.

2. **Is longitudinal, incorporating the entire educational system, from kindergarten through graduate and professional school.** Democratic access focuses not only on college entry or completion, but on improvements in student academic progress at every transition point in the educational pipeline. This comprehensive approach assures not only greater opportunities for access to college, but an expansion in the numbers of students who become college-eligible.

3. **Seeks to transform institutional structures and staff behaviors and attitudes.** At each stage of the pipeline, structural changes need to be made in the curriculum to build a strong foundation of academic skills in reading, writing, and math. Pedagogy should be changed to ensure that students find a lively, exciting teaching environment. Staff should provide encouragement, support, and validation.

4. **Clearly communicates what students need to go to college.** Students are told exactly what it is they need to be college-eligible at very selective, selective, and nonselective institutions (i.e., test scores, GPA, college-prep courses, etc.).

5. **Gives students *real choice*.** When students complete high school, they ought to have the luxury of choosing a particular college, selective or nonselective, after weighing the pros, cons and consequences of making their choice. They should also know the academic requirements of different fields of study.

6. **Provides financial resources.** Disadvantaged students who become college-eligible should not be shut out of college because they cannot afford tuition. Scholarships, grants, and other forms of financial aid should be provided.

7. **Documents progress through assessment.** At each transition point, data should be available to document improvements (i.e., test scores, GPA's, high school graduation rates, college-going rates, degree completion rates, etc.).

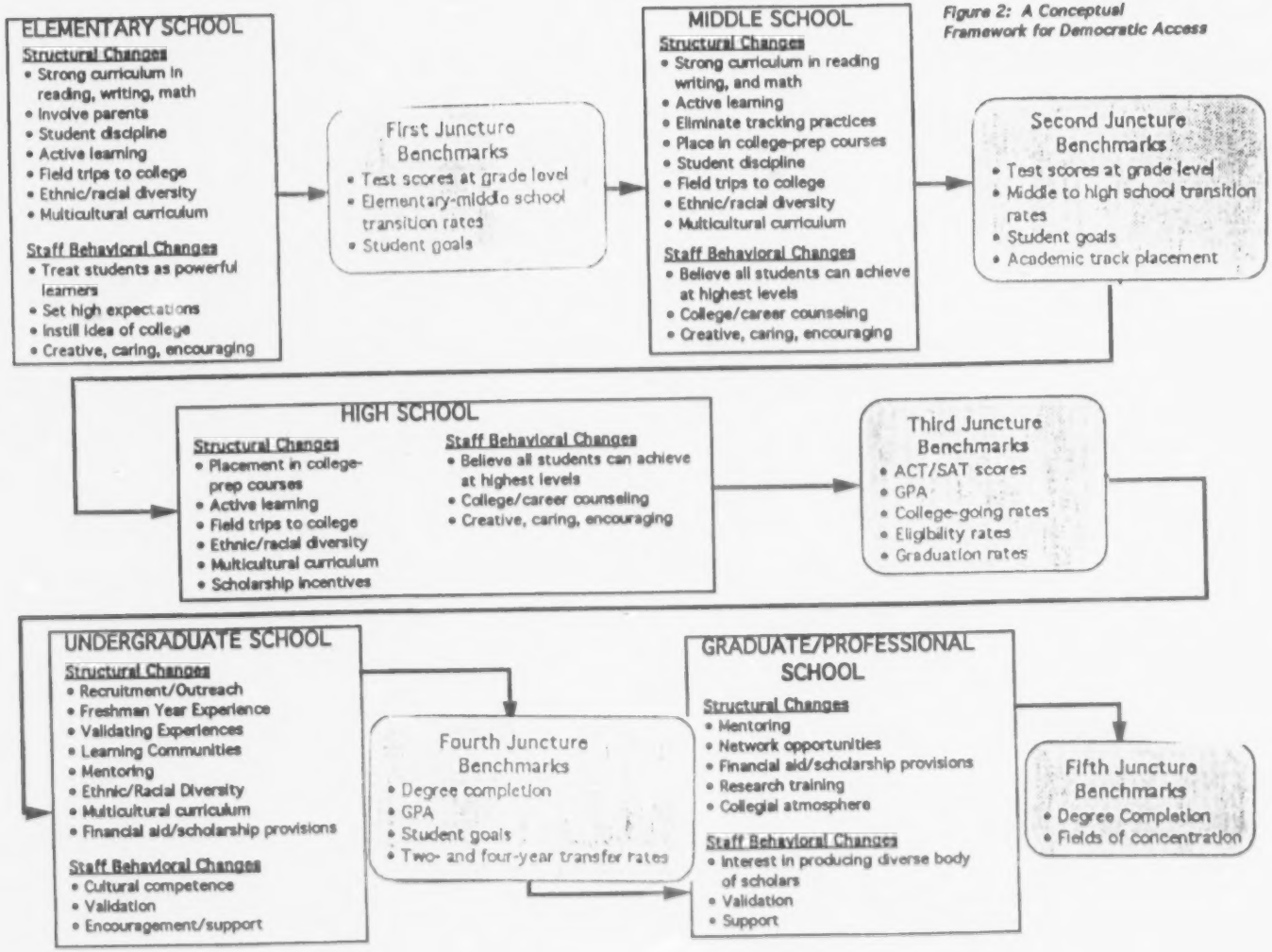

Figure 2: A Conceptual Framework for Democratic Access

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III. Implications for Policy Setting and Data Collection

America's opportunity gap can be narrowed. If there is anything good that can come out of the retreat from Affirmative Action, it is that institutions will be taking a closer look at barriers that limit college access for disadvantaged students and experimenting with solutions. Perhaps this will change the conversation from who gets included/excluded to how winners can be made of more students. Below are examples of what can be done.

1. Implement K-College Models Based on the Principles of Democratic Access

More K-college models are needed, especially in low-income areas, so that more students are able to have the opportunity to make college a reality. Houston's Project GRAD (Graduation Really Achieves Dreams) is the closest example of democratic access I am aware of that is already generating significant results. Except as noted, the following is a summary of information from Project GRAD's *Program Evaluation Report* by Kwame A. Opuni, October 4, 1996.

After many years of searching for solutions that could significantly improve academic performance and college-going rates in inner-city schools, in 1993-94 a comprehensive, school-community collaborative model was initiated–Project GRAD. The Executive Director is Jim Ketelsen, former CEO of Tenneco. The Project has multiple funding sources, including a large grant from the Ford Foundation. Among the numerous reasons for success are Project GRAD's exemplary features:

A Feeder System Model. Project Grad targets two vertical feeder systems of schools–the Davis (predominantly Hispanic) and Yates (predominantly African American) corridor. The feeder system assures consistency throughout the K-12 system in terms of materials, classroom management, curriculum in reading and math, and collaborative learning. For example, the Davis cluster includes one high school, one middle school, and seven elementary schools. The idea is to create K-12 systemic change as opposed to fixing one school at a time.

A Common Curriculum and Classroom Management Program. The major components of Project GRAD are: 1) Success for All, an elementary school reading, writing, and language skills program; 2) Consistency Management and Cooperative Discipline, a discipline, self-responsibility, class-management, and parental involvement program for all school levels; 3) MOVE IT MATH, a mathematics program in the elementary and middle schools; and 4) Communities in Schools, a social services and case management program in place at all school levels. Teachers and administrators are trained to use these programs.

High Expectations and Promise of Reward. Tenneco provides a $1000 per year scholarship for four years in any college or university to graduating seniors. Students are very explicitly told what they have to do to get a Tenneco Scholarship: graduate from high school, take a minimum of three years of math, including Algebra I, Geometry and Algebra II, maintain a 2.5 GPA in core academic subjects, attend two summer institutes, at the University of Houston-Downtown, and graduate on time with

his/her class. The Tenneco Scholarships program, referred to as the Contract, is signed by the student and parents.

Documentation of Success. Prior to Project GRAD only 20 percent of the high school graduating class at Davis High School went to college. In 1997, over 70 percent of the graduating class qualified for scholarships. Statewide TAAS test scores have improved dramatically. In 1997, 72 percent of tested elementary students passed math, compared to 60 percent in 1996 and 44 percent in 1994. In middle school, 57 percent of tested students passed math, compared to 42 percent in 1996 and 21 percent in 1995. Reading scores have also improved significantly. Of the elementary students tested, 74 percent passed in 1997, versus 64 percent the previous year. In middle school, 63 percent passed the reading test in 1997, versus 47 percent in 1995 (Shoecraft & Shoecraft, 1997, June 26). *What is quite significant is it took only three to four years to generate these increases, substantiating that where there is leadership (Jim Ketelsen is the champion of this project), organization, training, funding, and commitment to change, success can occur with relative speed.*

Modest Cost. The cost of Project GRAD is $3.5 million at the Davis corridor, and averages to approximately $200 per student, a modest investment considering the significant returns.

2. **Develop Democratic Access Plans**

Universities should have viable democratic access plans at the undergraduate and graduate level. Access plans should focus on 1) increasing the pool of college-eligible students from non-privileged backgrounds and 2) developing an admission process to assure the continuation of a diverse student body. Berkeley's Boalt Hall law school's plan which considers socioeconomic status or attendance in secondary schools with poor college-prep courses is a step in the right direction. While schools and colleges organize K-college initiatives such as Project GRAD, it is imperative that the door to college remains open to underrepresented groups. Consequently, it will be necessary to stay the course on Affirmative Action for at least another 10 years to allow time for new initiatives to work.

3. **Assist Needy Students**

Making college affordable is critical to access. States should consider special programs to supplement aid for needy students. Recent legislative action to raise the Pell Grant to $3000 is commendable, but more is needed. Local schools and colleges should forge partnerships with large corporations (i.e., Tenneco in Houston) to provide college scholarships.

4. **Address School Funding Inequities**

Disproportionate numbers of poor and minority students attend schools with few resources, crowded classrooms, and low per-pupil expenditures. States should work to equalize school funding. In rural areas without a corporate presence, states should set aside resources to fund K-college initiatives.

5. **Strengthen the Transfer Function in Community Colleges**

While President Clinton pushes to make the first two years of college a universal experience, educators should not focus solely on short-term job preparation and vocational-technical degrees that do not lead to the baccalaureate. Careful guidance should be given to students about the differences between academic and vocational tracks. Every effort should be made to encourage more underrepresented students to prepare themselves for transfer and a strong core of transfer courses (along with a cadre of full-time faculty) should be made available.

6. **Assess Academic Progress**

Quantitative and qualitative data are needed to document the following:

- Features of models that work
- Student persistence rates
- The extent disadvantaged students are becoming college-eligible
- High school graduation rates using at least the beginning of high school as the base year, not the 12th grade
- The effects of raising the access bar for low, middle, and high income students
- College completion rates
- The multiple student- and institution-related factors that impact access in selective and nonselective institutions
- Longitudinal studies of students who were admitted with lower GPA's and/or test scores in undergraduate and graduate school. Do they graduate? What helps them transcend their unequal schooling experiences?

IV. Conclusion

Affirmative action is not a perfect policy, but neither is a policy based on individual merit. Regardless of which side we are on, America will continue the course of its cultural transformation. This is an era in which we are being challenged to develop and validate a new democratic state–one that is cooperative as well as competitive, one that preserves individual rights, yet works for the collective good. It is in this enlightened state that we can create the building blocks for democratic access and for a less impoverished society.

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FROM ACCESS TO PARTICIPATION

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Preface

It is my view that the point of providing students access to higher education is to give them a reasonable opportunity to participate in college and attain a college degree. Stripped of its implications for participation and persistence, the concept of access is, in this age of increased access, no longer a useful policy tool. In thinking therefore about how our data collection activities might change, I will argue that those changes must be such as to provide us the sorts of data we need to promote greater student persistence to the completion of college degrees, in particular 4-year college degrees.[1]

Moving From Access to Participation

As a point of departure, I want to refer to the history of busing in schools and its impact upon the educational attainment of disadvantaged children of color, for it provides a useful analogy for our thinking about issues of access in higher education. I think it is reasonably safe to conclude that busing children of color to predominantly white schools does not ensure meaningful integration of those children in those schools or in secondary education generally. Much depends on where children are bused and what happens to those children in the school to which they are bused. Quite often poor children of color who are bused find themselves isolated in separate academic tracks or in segregated groups within classrooms. Though busing may achieve the short-term goal of placing children of color in predominantly white schools, it frequently fails to achieve the long-term goal of providing equal opportunities of meaningful participation in American education.

In a similar fashion, since our concern is not simply that students go to college, but that they have a reasonable opportunity to complete a college degree, it seems only sensible that we consider not only whether students go to college, but also where they go and what happens to them in the colleges and universities to which they go. As in the case of high school busing, we need to know whether student experiences are such as to promote their meaningful participation in college.

My point is simple, namely that to obtain the data we need to more effectively address the issues of equity and attainment in higher education, we need to move from the concept of access, as we now know it, to that of participation in higher education. The data we collect must enable us to understand how access influences participation and, in turn, how participation shapes persistence to the completion of college degrees, in particular 4-year degrees.

Access versus Participation: A Case in Point

To give concreteness to our conversation, let me refer to Clifford Adelman's recent analysis of the long-term followups of NLS-72 and HS&B (*The New College Course Map and Transcript Files*).

Among other things, that analysis points up the fact that while access to higher education for both African-American and Hispanic-American students has increased over the past 20 years, rates of 4-year degree completion have declined among African-American students from 35.3 to 24.7 percent (Table 1 at the end of this paper). Indeed, among African-Americans, there has been an overall decline (47.9 to 40.2%) in the rate at which they earned degrees of any sort. Hispanic-American students, however, showed a slight increase in the rate of 4-year degree completion (25.2 to 26.4%) despite the fact that, relative to other groups, they are more likely to attend 2-year rather than 4-year colleges. Of course, these changes in rates of degree completion may mirror differences in who is gaining access. It may also be the case that these data are no longer representative of the experiences of the most recent beginning college student cohorts. Here the current BPS study will prove invaluable. There is little doubt that the colleges and universities of the 90s are different from those of the 1980s. At least some have moved aggressively to address the issue of persistence generally and of students of color in particular. In this regard, it is noteworthy that data from the American College Testing program indicate that while rates of BA degree completion have declined at the least selective public 4-year institutions, they have increased somewhat at the most selective public institutions (Table 2).

The point of referring to these data is not merely to highlight the complexity of the issues facing us, but to argue that our thinking about data and policy must enable us to disentangle the various ways in which student and institutional attributes interact to produce varying completion outcomes. In the case of African-American students, for instance, we need to know who is gaining access, where that access is being gained, and what happens to those individuals once they begin attending college. And we need to know how those events yield outcomes that differ for Hispanic-American students who are also gaining increased access to higher education. In this case, as in others, generalizations, though appealing, can be quite misleading.

Implications for Data Collection

Turning now to the issue of what a changed definition may mean for data collection, I will organize my comments into four domains of action for which changed data collection may help shape policy. These are **access**, **treatment**, **climate**, and **outcomes**. In each case, I will first pose questions that our data on access and participation must answer and then think out loud about the sorts of data we might *reasonably* collect to provide answers to that question. Having done so, I will then briefly describe changes in how we collect and coordinate data collection, and the sorts of policy actions that institutional, state, and Federal agencies might take with those data to promote greater persistence and degree completion. Though I will speak primarily to the data we need about individuals, I will also ask about the sorts of data we might want from and about institutions of higher education.

Access:

- Who goes where to college?

  Since place of entry has much to do with the likelihood that a person will eventually obtain a college degree, we need to know about the attributes of the places to which people gain entry. In addition to attributes such as selectivity and composition of the student body, we need to know about the institution's historical record of helping students succeed and, among 2-year colleges, its transfer rate to 4-year colleges.

- What is the nature of initial access to college?

  We also need to know about the nature of initial access. Does the person enter as a full-time or part-time student? And how are those terms defined by differing institutions? For part-time students, we need to know whether the student's initial participation is marginal or in some way a significant commitment to college (e.g., does the person take at least 10 credits of coursework?). At the same time, we need to know about those external situations that condition participation, such as whether the person works while in college and, if that work is full or part-time, career-related, or incidental in nature.

- What financial resources do students bring with them to college?

  Given the importance of finances to policy, we should learn about the financial resources people bring with them and/or obtain upon initial entry to higher education. But while it is important to have such information, it is my view that financial aid, despite the public press about it, is no longer a major barrier either to access or to one's ability to continue in college. Instead, decisions about applying to college and about participation in college are framed as much by personal issues—not the least of which are one's knowledge of alternatives and interest in pursuing those alternatives. This is not to say that, for some students, finances are not central to their decisionmaking. Nor is it to say that changes in finances do not influence persistence. They do, especially among persons with limited financial resources. But for most students, finances are no longer the barrier to attendance or persistence that some observers make them to be.

- What skills do students bring with them to the places to which they gain entry?

  Because academic skills shape initial forms of participation as well as subsequent learning and persistence, we need to know about the skills students bring with them to college. Are students adequately prepared for the colleges they enter? If not, in what areas are they inadequately prepared and therefore in need of assistance? And how can we measure those skills in ways that enable us to make reliable comparisons between students in various college settings and in different states?

  It is to state the obvious to note that the issue of skills and skill assessment is less than simple. Among other things, we have yet to agree on how we can measure skills in a nondiscriminatory manner and use those measures to place people in appropriate learning settings. In any case, we have yet to establish precisely what skills are needed for college completion. Nor have we established whether those skills are "prerequisites" for college entry or can be acquired while in college.

- What expectations do students have for degree completion?

  As expectations also shape participation, both initial and continuing, we need to ask about the character of those expectations. What expectations do students have for themselves? How many expect to earn a 4-year college degree? And among students entering 2-year colleges, how many expect to transfer to a 4-year institution? The fact is that many high school graduates who could go to college do not and many who

enter college who could earn a degree choose not to. This is not to say that college is for everyone or that all college students should want to earn a degree, 4-year or otherwise. Rather, it is to say that our ability to understand the forces shaping access and participation hinges upon our ability to sort out at entry the behaviors of those who intend to persist from those who pursue more limited goals, including those who may be only "trying out" college.

Treatments:

- What types of treatments (e.g., remedial, language, tutoring, advising) do students receive upon entering college?

- How effective are those treatments for different students in different institutions?

Given that many individuals need assistance to complete their degrees, we must collect reliable comparative data about the types of assistance or treatments they receive as well as information about the effectiveness of the treatments. Though we have a number of individual national and state studies of different assistance programs, we do not yet have a common treatment by student by institution map which tells us how student needs and institutional treatments are distributed among students and institutions within states and across the nation. Though this is partly the result of not having agreed upon ways of assessing student needs, it is also a reflection of our inability to develop a common set of descriptors for treatments that cuts across institutions and states.

Having set out the attributes and distribution of treatment among institutions, we also have to develop a uniform way of assessing both the receipt of treatment (i.e., what constitutes having received a treatment) and the effectiveness of treatments received. This means, of course, that we have an agreed upon set of criteria by which treatment effects are judged. Too often assessments of specific treatments (e.g., "remedial" coursework) are judged only by grades awarded, rather than skills learned.

Climates:

- What are the institutional climates for student learning and persistence?

- What are students' experiences in those climates?

Since institutional climate, both academic and social, influence both learning and persistence, we need to know about the character of those climates and about student experiences within those climates. In particular, we need to know about students' educational experiences within the classrooms and laboratories that mark campus academic life. Are students attending classes? Are those classes being taught by full or part-time faculty? By graduate assistants? Are students actively involved in those classes? Are they receiving feedback on their work? And are they participating in any group and/or shared learning activities that have been proven to facilitate student learning?

In regard to climates more generally understood, we need to ask about the degree to which students encounter "climates of support" that facilitate their learning and degree completion? How do those encounters differ for students of different gender, class, ethnicity, and levels of academic preparation? Do minority students' encounters with faculty and staff inside and outside the classroom "validate" their presence on campus, or do those encounters lead students to become isolated and marginal to the academic and social life of the institution?

Finally, we should learn of the correlates of effective institutional climates. What are the programmatic attributes of effective climates and what are their associated forms of institutional, state, and Federal support? In regard to the issue of diversity, is there a link between institutional policies for the inclusion of persons of color among students, faculty, and staff and the success of those students?

Outcomes:

- What is the progress of beginning and transfer students to their certificate and degree programs?

  We need to continue collecting consistent data from each and every institution on the progress of beginning and transfer students to certificate and degree completion. To do so we must reach a common agreement across institutions and states as to what levels of participation results in a person being counted as a member of an entering cohort and at what point during a semester one counts or "freezes" the cohort for purposes of data collection. For instance, should we include in a cohort a person who registers for only one course and/or attends that class for only the first two or 3 weeks of the semester? However we decide, we must collect data on part-time as well as full-time students. Last, an increasing number of college students are earning their degrees largely, if not entirely, through part-time enrollment.

- What are the criteria for degree completion?

- What do students learn in acquiring those degrees?

  Since the point of gaining access is to earn a college degree, we need to know what those degrees require of students and what students acquire as a result of meeting those requirements. What do different degrees require of students? Are different institutions consistent in their degree requirements? Can we develop for degrees an analog of the notion of "course equivalency" that is now being pursued by several universities? Are there alternative degree requirements that are "equivalent" to those that now mark degree programs of higher education?

  More importantly, we need to know what students are learning as a result of being in college and meeting degree requirements. What knowledge and skills do they acquire in the fields in which the degree is granted? And how do those outcomes vary for different degrees, institutions, and students? Do students in similar or "equivalent" degree granting programs in different institutions acquire roughly the same degree-specific skills? If those outcomes differ, what are the correlates of those differences?

Implications for Data Collection Policies

In fairness, it must be noted that some, if not a good deal, of the data items noted above are already being collected. For instance, the current BPS will soon collect data on student campus and classroom experiences and, in time, be able to link those experiences to persistence outcomes. At the same time, the recently completed National Survey of College Learning by the National Center on Postsecondary Teaching, Learning, and Assessment has mapped learning outcomes for the first 2 years of college. For a representative, but limited, national sample of 4-year college students, it can now be said that we do have some reliable data on college learning outcomes.

I point this out simply as a way of reminding us that part of the difficulty facing us in moving from the concept of access to one of participation may have to do with our ability, or perhaps inability, to coordinate the work of different agencies that are already collecting data on college students, to reach agreement on common definitions and measures, and to follow through with data collection that has already taken place. The fact is that we already have in place mechanisms that can, if properly supported, collect much of the data we need. What we do not yet have is agreement on the sorts of data to be collected.

That being said, it remains the case that some data, most notably those that call for comparisons between institutions within and between states (e.g., full-time enrollment, degree requirements, etc.), require a type of data collection and coordination of data collection activities that we have yet to achieve. Here I have several suggestions.

- First, we need to establish agreed upon criteria for defining and measuring concepts such as enrollment in an institutional cohort, minimum academic skills for college, and minimum standards for degree completion that specify learning outcomes, not simply credits earned.

- Second, we need to establish consistent guidelines for the collection of tracking data that enable us to monitor the flow of students into college and their continuing participation to degree completion, and we have to do so in ways that enable us to build, across institutions and states, a reasonable national portrait of student participation in higher education.

- Third, we need to begin collecting data on student skills at entry and learning outcomes at degree completion in ways which enable us to disentangle the role of the individual from institutional actions in shaping those outcomes. At some point, we must have the capacity to ascertain to what degree different colleges contribute both to student learning and degree attainment. And we must do so in ways that allow us to compare the contributions of different institutions for different students.

- Fourth, we have to more fully tap the potential of computer networks for the collection of institutional data. Web-based surveys should be constructed that enable us to collect, code, and immediately analyze basic data on institutional attributes, functioning, and outcomes. Similarly, we should take advantage of the movement of institutions to online student tracking and degree audit systems to plan now for coordinated online institutional, state, and national reporting systems.

Implications for Policy

Given data collection procedures, let me finally suggest, as a social theorist, several possible policy actions directed toward the goal of increasing persistence to degree completion generally and for disadvantaged students in particular.

- First, we should move toward a system of institutional, state, and perhaps national reporting that enables prospective students to compare the performance of institutions in terms of access, participation, progress, degree completion, and learning outcomes.

  Here several possibilities spring to mind. We can issue annual "report cards" that provide data on institutional performance (e.g., persistence, learning outcomes). We could move to the reporting of "expected" versus "actual" measures of institutional performance as some have proposed. Better yet we could follow the well-established practice of the mutual fund industry and report both raw and comparative measures of institutional performance (e.g., something akin to rankings or alpha scores based on performance within a cohort of similar type institutions).

  Another possibility, one that is already being partly adopted, is to ask all accrediting agencies and state departments of higher education to develop persistence and learning inventory or audit-systems that require institutions to collect data on and report on those activities known to promote both enhanced student learning and persistence to degree completion. If only because of the impact on data collection and reporting on heightened institutional awareness, one would expect some institutions to begin reconsidering and perhaps changing the nature of those activities.

- We should explore the development of state and national metrics that enable us to estimate how the patterning of student participation in different colleges at time of entry results in estimated state and national rates of degree completion six or more years later.

  Assuming we can collect institutional rates of transfer and degree completion for each institution within each state, it would be possible to estimate, given the distribution of a beginning postsecondary cohort among institutions within each state, the likely state and national rate of 2- and 4-year degree completion 6 years later. Even though such estimates assume unchanging institutional, contextual, and economic conditions over the 6-year period, they still can be used to construct policy "scenarios" that project how changes in state or national policies (e.g., changes in tuition pricing or in the subsidization of college for particular segments of the population) will affect college completion rates in the future—in this case through the effects of pricing on the redistribution of individuals among colleges.

- We should establish state and perhaps federal systems of incentives and/or move to types of performance-based funding that reward institutions for promoting institutional climates and forms of participation that engender greater persistence of students generally and disadvantaged students in particular.

There is no great mystery to what institutions can do to enhance both student learning and persistence to degree completion. The question is not so much one of what to do, but of the willingness of institutions and indeed states to take those actions that have been shown to be effective in producing those outcomes.[2] Here incentives, performance-based funding, and systems of institutional reporting all come into play. We simply cannot avoid to do what we know can be done to enhance to participation in higher education.

Closing Thoughts

As more students gain access to higher education, the importance of simply going to college diminishes relative to finishing college. Furthermore, we know that increased access to college, for some students at least, does not easily translate to increased completion of college degrees. In so far as the completion of college degrees is a valued individual and social goal, our data collection must provide information we need to frame policies that translate access into forms of participation that lead to those degrees. And it must do so especially for those persons who have been underrepresented both in access to college and in the completion of college degrees.

In this regard, let me suggest an alternative to the current definition of access, which links the notion of access to that of participation and attainment in a way that allows us to develop a common metric of institutional performance. For the lack of a better term, let me refer to this concept as "educational potential." To follow upon the concept of potential energy in physics that describes the potential an object has for action (kinetic energy), we need a similar concept in higher education that captures the notion that individuals gain access to institutions of higher education with differing educational potential, that is, educational resources (e.g., skills and abilities, motivations and expectations, and financial) that can be tapped by institutions and "converted" into educational action. We can then ask how institutions, faced with students of differing "educational potential" at entry, convert that potential into educational actions and in turn educational attainments such as persistence. Again, to follow the physics analogy, we can then inquire not only about institutional retention rates, but about the rates at which institutions "convert" student potentials into actions and attainments. One result is that we can then develop a common institutional performance metric that captures how access of different students is linked to attainment via institutional action.

In conclusion, let me observe that we have left student learning and persistence too much to chance and have paid too little attention to the sorts of actions we know can and should be taken to achieve those goals. While individuals and institutions are ultimately responsible for the achievement of those goals, there is much that our data collection procedures can do to help. It is to this end that these comments have been directed.

Footnotes

1. This should not be taken to imply that 2-year degrees are not valuable. Clearly they are. Rather it is to underscore the fact that 4-year degrees continue to serve as a dividing line in American society. For instance, evidence mounts that the income gain (relative to high school graduation) attributable to college education is increasingly the result of acquiring a 4-year degree. Increments to earnings, relative to high school graduation, resulting from additional years of college have diminished relative to earnings increments associated with the completion of the degree.

2. For instance, why is it that faculty in higher education are the only faculty, from kindergarten through graduate school, who are not trained or required to teach their students? If we understood why it is that elementary and secondary school teachers should be trained and certified to teach their students, why do we not apply the same understanding to faculty in colleges and universities? Is their teaching any less important?

Table 1. Changing Rates of Degree Completion of Different Ethnic/Racial Groups

Data Source*	NLS		HSB/SO	
Group	Certificate and/or Associate Degree	BA or more	Certificate and/or Associate Degree	BA or more
Anglo-American	14.8	50.4	17.6	48.5
African-American	12.6	35.3	14.5	24.7
Hispanic-American	16.7	25.2	18.8	26.4

* Universe consists of all students who had earned at least 10 credits.

Derived from Clifford Adelman (1995) *The New College Course Map and Transcript Files*. Washington, D.C., U.S. Department of Education (p. 26).

Table 2. Changing Rates of BA completion From Public Institutions of Different Selectivity*

Institutional Selectivity	1983	1985	1988	1990	1991	1992	1994	1996
Highly Selective	66.1	67.1	63.9	62.7	62.9	66.2	68.0	72.4
Selective	56.6	54.6	52.7	52.7	51.9	52.2	49.7	50.9
Traditional	54.4	53.2	48.8	47.4	45.3	45.1	44.2	46.6
Liberal	47.9	45.5	42.6	42.1	40.6	40.1	37.4	34.2
Open	44.1	43.5	40.5	40.5	40.4	38.2	38.1	32.9

* Derived from data provided by the American College Testing Program, Iowa City.

New Dilemmas of Access and Implications for National Data Use/Availability: A Summary and Annotated Bibliography of Sources

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NEW DILEMMAS OF ACCESS AND IMPLICATIONS FOR NATIONAL DATA USE/AVAILABILITY

Preface

This summary and annotated bibliography was commissioned by National Postsecondary Education Cooperative's policy panel on access. The charge was to identify a series of publications (published articles, research reports, etc) that best illustrate how national data are used to study access and could inform the policy panel on various concerns. Specifically, these were outlined as a concern for changing definitions and factors that influence postsecondary access, including dimensions of finance, personal characteristics (goals attainment, performance, and involvement), preparation for college, geographic location, cultural characteristics (socioeconomic status and race/ethnicity), and transitions between levels and types of postsecondary providers.

The review process involved conducting literature searches on the *ERIC*, *Sociofile*, *Pyschlit,* and *Dissertation Abstracts* data bases, and identification of review articles that could provide additional sources. Approximately 272 publications or papers were identified since approximately 1982 (see Table A-1). From among these we selected publications that had some degree of availability and could inform the panel in the areas mentioned above as well as other areas prevalent in the access literature, including studies on age/nontraditional students, gender issues, and involvement of significant others (parents, peers, and teachers). Other relevant areas that emerged from the literature review included variation in college attendance patterns that have implications for definitions of access; college choice; and the relationship between college choice and persistence–all topic areas that have implications for data collection. We paid particular attention to varying levels of postsecondary education in an effort to broadly understand college participation. We did not, however, conduct an extensive search on college retention or college admissions but reviewed related works that linked these areas with broad access concerns. It should be noted that we conducted additional searches for research utilizing NCES data bases with an emphasis on postsecondary students (see Table A-2 for a glossary of these data bases) to identify studies that had used federal data to study access and could provide a sense of existing limitations.

To the 272 bibliographic resources, we added authors' abstracts to database abstracts that were available (see Section IV). We then selected 125 articles to review in each of the categories (Section III), took notes from some microfiche documents that were too long to copy, and selected two that were most relevant to the panel's concerns. These are available in a topical bibliography in Section II. In addition, we scanned all 125 articles for limitation statements that pertained to the data used in the respective studies. We were surprised, however, by how few articles contained limitation statements that pertained to the data bases. It is not that the data are flawless; it may simply reflect authors' tendencies to avoid highlighting limitations that could fuel journal reviewers' critiques and risk publication.

In the process of developing annotated summaries of 21 articles, we were asked to select articles that would be forward thinking, but given the lag in data availability and publication of articles, no publication was ideal in this regard although many provided food for thought. We opted to summarize studies that made good use of available data, whose results might inform myths or controversies about access, and/or focused on areas that could be expanded in national data collection or become highly relevant in a changing policy context. The summary in Section I provides an overview of the landscape of issues raised in the research literature.

Section I: Summary

Introduction

We summarize emerging issues from the research literature that may take on new importance as the nation is in the midst of a changing policy context on access to postsecondary education characterized by cross pressures that at first blush appear at odds with each other. At the same time that there are conversations regarding goals for universal access to postsecondary education, there are actions taken to alter or redistribute college opportunity programs (e.g., financial aid and affirmative action) that higher education has relied upon to expand access to diverse student populations. National studies have shown the system of higher education has accommodated these conflicting positions: the data illustrate an American system of higher education that is both selective and open, as well as the attendant problems in such a flexible system. These national studies may inform decision-making or at least "foretell" the difficulties involved in particular policies and their impact on different groups of students in their college participation. In addition, gaps in understanding emerging from these studies may imply areas in which the available data could be better suited for current research, especially in light of changing policy contexts.

Because much of the research has been conducted on previous generations of students and new studies using currently available data are in the pipeline, many of the "new dilemmas" identified here are not really new but may actually be more pronounced today. This summary first identifies the question evident in many studies regarding access (Have we achieved equal access?), the answer to which hinges on how access is defined and then studied across various populations of students. Second, we briefly detail some of the factors found to influence access to college and college participation to illustrate the uses of data. The summary, however, does not do justice to the large developing lines of inquiry in each of these areas (e.g., the effects of financing college, college choice behaviors, and race and gender differences–see reviews cited in bibliographic sources for more effective treatments). Third, we attempt to summarize data limitations and needs found in our review of research. Much of the recommendations regarding better data collection may come from users of these national data, however, identification of new areas for data collection also emerge from smaller scale studies and theoretical notions about the college-going process.

The Question of Defining Access and Equal Access

The question of differences in access for various groups has been pursued now for a number of years and researchers have made good use of the national data to examine whether women and students from varying socioeconomic backgrounds and races/ethnicities attain access to college. With some exceptions, improvements in national longitudinal samples have permitted more reliable data on different racial/ethnic groups[1]. Several studies are now concluding that a substantial degree of equity in access to postsecondary education exists since students with high aptitude are attending college at roughly equal rates across groups (Gardner, 1987), women are represented in equal proportions in postsecondary education if not more likely to attend college than men (Jacobs, 1996; Karen, 1991), and controlling for a

[1] Small samples of Native Americans have not permitted extensive analyses on this group, preventing in-depth analyses on the current trends or issues that are critical for these students (Hurtado, Inkelas, Briggs, and Rhee, 1997). Other researchers have complained about the racial/ethnic samples in earlier databases, High School and Beyond and the National Longitudinal Survey 72 surveys, that prevent disaggregation of ethnic groups or separate group analyses (St. John and Noell, 1989; Steelman and Powell). This has been corrected in the National Educational Longitudinal Survey 88 but a difficulty still remains in studying Native Americans in virtually all postsecondary data bases.

range of factors, African-Americans[2] have a higher probability of attending college than White youth (Kane and Spizman, 1994). While some researchers provide evidence regarding the "good news" of progress toward access for all groups, most researchers (including those mentioned above) have highlighted problems that suggest that attaining equal access remains an elusive goal. Some contend that differences in higher education opportunity continue to exist, indicating that African-American and Latino postsecondary enrollments have actually declined relative to their population among high school graduates in metropolitan areas (Paul, 1990).

Several issues affect these research findings that have much to do with definitions and assumptions that underlie research studies. First, the higher education system appears less class-based and more open to diverse groups when a broad definition of access to postsecondary education is used (e.g., attendance at *any type* of postsecondary institution at least one year after high school) (Hearn, 1988). The broad definition of access to *any* postsecondary institution ignores the important fact that there is a hierarchy of resources and opportunities that come with attendance at different types of postsecondary institutions (Hearn, 1988), and these differ even at 4-year institutions that are further differentiated by selectivity status (Karen, 1991). In this regard, even women who have posted significant enrollment gains in the last twenty years are more likely to be represented at the lower tier of postsecondary education and are less likely to attend selective institutions (Hearn, 1988; 1991; Karen, 1991; Rosenfeld and Hearn, 1982). There is also evidence across studies that suggest as the higher education system expanded access to broader groups of applicants, much of the considerable enrollment growth occurred among the lowest tiers of the postsecondary system (e.g., Grubb, 1989, 1991). Enrollment among vocational programs increased substantially more than 4-year college enrollments and was particularly high among females, students of low socioeconomic status (SES), and students from vocational tracks (Grubb, 1989). At the same time, pressure from families and competition among high SES students to get into the "right" college at the top of status hierarchy increased substantially (McDonough, 1994)–a phenomenon that has not been captured in national data. On a limited scale, a qualitative study revealed how high SES parents position their children (middle-range academic performers) to attain access to the best colleges, utilizing a growth industry of services that can place low SES students without such assistance at a disadvantage (see McDonough, 1994). Thus, according to the broadest definition of access to *any* type of institution, we may be quickly approaching universal access and the picture for various groups can be portrayed as "good news." However, most would now contend that this hardly represents *equal access* as students become aware of distinctions among postsecondary options, the system becomes more differentiated, and researchers reveal how different groups tend to pursue distinct postsecondary opportunities.

A second issue that represents difficulty in understanding whether we can actually attain equal access is that students' college-going behaviors are changing. Traditional modes of attendance appear to be increasingly confined to students from high socioeconomic backgrounds and among racial/ethnic groups who are best prepared for college. Hearn (1988) investigated 13 different college attendance patterns that reflected combinations of status (part-time vs. full time), timing for college (delaying entry or electing to attend immediately after high school), and type of institution (non-degree granting, 2-year and 4-year institutions). Adelman (1992) identified 10 attendance patterns for community college participation alone that included variations of transfer, degree and non degree

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[2] For the balance of this report, the terms "Black" and "African-American" will be used interchangeably. Generally, our choice of wording is reflective of the terminology used in the empirical studies being cited. As well publicized in the recent conflict over the racial/ethnic category in the 2000 Census, the question of how to categorize the various racial/ethnic groups in the U.S. remains a critical policy issue that is also pertinent to the study of access to postsecondary education.

enrollment, and number of college credits earned. Students appear to be partaking of higher education in a wide range of ways and it not clear whether students simply lack goal direction (Grubb, 1989), have no intention to transfer or earn a degree, or even whether institutions encourage this by broadening their curriculum to meet community needs (e.g., expansion of ESL programs, see Cohen and Ignash in ACE, 1993). Grubb identified this phenomenon of taking courses without a coherent plan or program of study as "milling around" in his study of vocational education (1989) and refers also to "experimenters" in his 1991 study of the decline of community college transfers from the 1970s to the 1980s. This phenomenon has the potential to increase under universal access conditions, and cannot be understood until we collect more national data about students' intentions for coursework, and their varied reasons for attending and leaving institutions (Grubb, 1989). Simply taking a postsecondary course is a vastly different form of college access from obtaining a set of courses that provide skills needed for the labor market. The question arises whether a definition of access might be further refined and include such factors as pursuing a coherent degree program or a specified number of credits, or whether this may be too stringent a definition given the variety of student attendance patterns and reasons that students may experiment with higher education. Recent attempts at developing more coherence in the undergraduate experience have been studied by some researchers (Tinto, 1996; Tinto, Russo, and Kadel, 1994); however, this remains undocumented in the national data.

Studies may not take into account this range of attendance patterns and student intentions for college in studies of college attendance. One study found that when only region, background, test scores, and high school experiences are considered (assuming "all things are equal"), African-Americans are more likely to attend college. However, introducing measures of aspirations among African-Americans revealed that these students were not significantly more likely to attend college (St. John, 1991). This suggests that aspirations play an important role in determining college attendance for African-Americans, as do the other control factors of gender, family background, and ability. Another study found that enrollment advantages were only activated in the academic context, where African-American students have similar test scores, grades, and high school curriculum (Hearn, 1988). Thus, to assume that the majority of African-American students are of equal social and academic background overlooks the fact that such instances of parity are rare (Jackson, 1986; Hearn, 1988). Even with these controls employed, results of a study of college application and choice behaviors revealed that African-American students are significantly less likely to be admitted to their "first choice" institution in comparison to white students (Hurtado, Inkelas, Briggs, and Rhee, 1997). This raises the additional issue of whether we will achieve equal access when there are no significant group differences in attending one's first choice institution, and/or students appear to be achieving their desired goals.

This is complicated, however, when one takes into consideration the great range in variation across groups in terms of college preparation and application behaviors. Although there is less variability among the highest achievers, among the NELS:88 cohort, there are significant group differences in students' early aspirations, preparation for college, and college application behaviors–all factors that portend different paths to college if students, in fact, elect to pursue some type of postsecondary institution (Hurtado, et al., 1997). Latino student aspirations are lowest and, among seniors, they appear to be the least informed and ready to apply to college compared with other groups: approximately 75 percent of them apply to either <u>one</u> or <u>no college</u> by the end of 12th grade. This constitutes a lack of choice of college options among a fast-growing, college-age population. Spanning three decades now, consistent results across a range of national studies show that Latinos are less likely to gain access to college, particularly 4-year institutions, when compared with other groups (Olivas, 1979; Grubb, 1989; Paul, 1990; St. John, 1991). Both Latino and Native American students are most likely to be enrolled in sub-baccalaureate programs, but we lack adequate national samples of Native Americans to understand

their progress. Observing changes among the groups least likely to gain access may be one barometer of national progress toward equal access.

One can contend that retention is an important part of the equal access puzzle, but student attendance patterns complicate our understanding even further. Reviews of the literature on college participation (broadly construed) have combined access and retention issues (Velez, 1996; Jacobs, 1996), and several writers assume a link between access and persistence but have not developed an empirical connection (e.g., Camburn, 1990; Kane, 1994). From an institutional perspective, the issues of both recruiting and retaining students become critical when the goal is to maintain and manage enrollments (Hossler, 1984). From a student development perspective, colleges have developed services that range from entry to exit. Many of the same factors thought to predict college access also tend to predict retention (SES, academic performance, aspirations); however, relatively few studies have combined the theoretical underpinnings of both the college choice process and student retention models. Only two solid empirical attempts to utilize choice variables in a persistence model were identified. A regional study found that student predispositions in the first phase of the college choice model (Hossler and Gallagher, 1987), particularly parental encouragement for college, influences both college selection *and* persistence (Stage and Rushin, 1993). A second national study, employing a market-based model regarding the relative costs and benefits of attending a particular college, reveals that students make particular college choices and decisions to stay based on financial reasons and fixed costs (St. John, 1996).[3] This suggests a tendency among students to reevaluate their college choices based on financial issues, which results in movement across institutions or the decision to leave higher education altogether. One state study found that up to half of the students used 2-year institutions as "occasional" institutions, where students selected courses to supplement degree programs of study began elsewhere (presumably at a lower cost) (see Palmer and Pugh in ACE, 1993). Thus, access can be broadly defined as college participation but whether it is continuous participation at one institution or continuous participation at several institutions remains to be specified.

While transfer slows the rate of postsecondary progress (Grubb, 1989; 1991), it must also be considered under the general umbrella of college participation. Studies predicting transfer also bear a strong resemblance to college attendance models (in terms of measures of student background, aptitude, and high school characteristics), with the addition of limited measures of experience at the 2-year colleges (Lee and Frank, 1990; Grubb, 1991). One study on vocational education revealed students who reported attending two or more institutions were more likely to complete a degree that those attending one or two institutions (Grubb, 1989). This is a somewhat surprising finding but it raises the important issue of whether the most goal-directed students make the most use of the variety of postsecondary options to fit their lifestyles.

College participation must be evaluated over a long period of time because student attendance patterns continue to challenge traditional notions of both access and retention. For example, from a short term (institutional) perspective, students' voluntary departures may constitute drop-out behavior, but from a long term (individual) perspective it may actually reflect transfer behavior. Transcript data has been useful in studying more unusual college attendance patterns, but Grubb (1991) in particular noted, given the time students are taking to complete BA degrees, the period of time for which there are postsecondary transcripts is relatively short (four years for HS&B and seven for NLS'72). Four years is too short a period to describe all transfers and BA completions because we now know that many

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[3] The study employed NPSAS data to evaluate the effects of college choice reasons (financially- related) as well as the fixed and controllable costs of attending college obtained independently of student reports.

students may still be taking college coursework. To capture the broad picture of college attendance patterns, transfer between institutions, college completion, and the phenomenon of seeking college attendance (or returning to college) in later years of life, longitudinal data on individual students continue to be necessary.

Factors that Influence College Attendance

Most researchers have made use of NLS 72, HS&B, and NELS:88 (and occasionally NPSAS, BPS, and IPEDS) to understand the factors that are associated with college attendance (defined differently by researchers). In this summary we briefly highlight these findings but also include results from studies that did not use these data to point out areas that might be of interest in improving data availability. Without a doubt, studies support the notion that previous academic performance influences college attendance. Under the category of academic performance, researchers have investigated such issues as high school grades, academic tracks, test scores, high school rank, and type of high school attended – all of which influence college attendance. There are a variety of pre-college achievement measures in NELS:88 to actually estimate, using various selective admissions criteria, how few students in the cohort may be prepared to meet selective admissions criteria (less than 6%) (see Owings, McMillen, and Burkett, 1995). Further, students who meet the "cut-offs" for the criteria established in this study are not evenly distributed across populations of students (Asian Americans and high SES students fare the best along the identified criteria). A rich set of precollege achievement measures in NELS:88 reveals that some students may fare better than others depending on the emphasis given to different criteria in admission to particular types of institutions. It should be noted, however, that other postsecondary student data (NPSAS and BPS) lack adequate precollege achievement measures that are necessary for understanding subsequent college participation. We return to this point at the conclusion of this summary.

Student degree aspirations remain important in models predicting access, and are especially noted in studies of particular minority groups (St. John, 1991; Cardoza, 1991), with early aspirations being a key influence in decisions to attend college (Hossler, Braxton, and Coopersmith, 1989). It should be noted that there is some evidence that suggests aspirations can be disconnected from student behavior and, therefore, alternative explanations for determining college access should also be sought. For example, African-American high school student aspirations and plans remained high and on an upward trend, even during a decline in college entry experienced among African-Americans in the 1980s (Hauser and Anderson, 1991). Similarly, no decline was detected in student aspirations over a ten year period (Gardner, 1987) and students' aspirations generally increase during high school to the point where almost 90 percent of high school seniors expect to attend some type of postsecondary education in the 1990s (Hurtado, et al., 1997). Yet since we know that less than 90 percent of high school seniors achieve such aspirations, this suggests that other factors may actually prevent students from achieving their goals of a higher education.

Consistent across studies is the influence of family socioeconomic status and parental education in precollege achievement, students' aspirations, decisions to attend college, selection of particular colleges, strategic planning for college, and college attendance patterns. While most federal data have measures of SES, studies highlight the need for better measures of "social capital" or ways that parents are able to assist students prepare for college. College choice studies have emphasized the role of parental influence through measures of parental encouragement (regardless of income), and parental expectations (Smith, Bealieu, Seraphine, 1995; McDonough, 1994, Stage and Rushin, 1992). Further

work has investigated parental involvement in planning, plans for saving, and responsibility for assisting students from various backgrounds to pay for college (Flint, 1992; Hossler and Vesper, 1993; Steelman and Powell, 1993). Several regional studies have also traced the roles of teacher expectations and peer encouragement for college (Hossler and Stage, 1992), which are not prevalent in postsecondary data or even precollege data on students. These family, school, and peer contexts are often related to SES but can also exert important effects on students independent of SES.

In some cases, advantages of geographic location in college attendance can best be explained by SES of the family and region (Mortensen, 1995); however, geographic region can independently predict college attendance after controls for family SES are introduced (Smith, Beaulieu, and Seraphine, 1995; Kane and Spizman, 1994). In particular, these latter studies show that rural students are least likely to attend college and suburban students have a slight advantage over students in metropolitan areas. Residents from the South and Northeast are also more likely to attend college than students from other geographic regions. Specific studies of students within metropolitan areas reveal that access for various racial/ethnic groups is not on par with their relative proportions of the population in those same areas (Orfield and Paul, 1988; Paul, 1990).

The financial aspects of college access have been studied at both a macro-level (student enrollments across institutions) and a micro-level (decisions made by individual students). Both these levels have been addressed in a literature that can be further differentiated between studies of student responses to changes in tuition (price-response); responses to tuition and financial aid to meet costs (sometimes termed cash-flow response); and the effects of tuition and types of financial aid for different student populations at different types of institutions. At the macro-level, studies show that higher prices reduce higher education enrollments, and that students have historically been more responsive to tuition prices than to (offsetting) student aid (Leslie and Brinkman, 1987). Most researchers have creatively used IPEDS enrollment data in combination with a number of other constructed data sets in order to study price response issues in higher education. An example of a unique combination of data sets reveals enrollment variations over time by institution type, and the enrollment changes of different racial/ethnic groups, first-time enrollments, and part-time and full-time enrollments in relation to tuition and state grant spending at public institutions (see Heller, 1997). Recent studies suggest enrollment changes can be affected somewhat by students who respond to various types of financial aid (St. John, 1993; Heller, 1997). Such enrollment research may be further facilitated, however, with an IPEDS trend file of institutional enrollments and the addition of institutional characteristics such as selectivity and tuition across time.

At the micro-level, using NPSAS and HS&B, researchers have found that changes in tuition costs influence the enrollment decisions of low-income students, community college students, 2-year vocational students, and the within-year persistence of students at private and public colleges (St. John, Oesher, Andrieu, 1992; Ordovensky, 1995; Grubb and Tuma, 1991). In evaluating the impact of financial aid, consistent research reveals that all aid types influence student enrollment decisions and that particular groups may be more sensitive to different types of aid (Fuller, Manski, Wise, 1980; St. John and Noell, 1989; Leslie and Brinkman, 1988). Low income students are more responsive to grant amounts as are African-Americans and Hispanics, while the effects of loans appears to be less influential (Jackson, 1990; St. John, 1990). Several studies and reviews of literature have also mentioned the positive effects of work-study for students in terms of retention and transfer (Velez and Javalgi, 1987; Velez and Baker, 1996). Further work on policy changes in the area of financing continue to prove useful in evaluating students' responses to changes in tuition and aid, although some researchers remain concerned that the effects of new packaging policies cannot be reliably predicted with data from older cohorts of students

who were not heavily utilizing these different types of aid packages (e.g., the use of loans is more widespread now than was true during earlier data collections when loans were confined only to particular types of students).

Researchers have made good use of the federal data to understand who gets to college, but less use of the data has been employed to understand aspects of student experience once they arrive on campus. We suspect this has much to do with limitations of the data we describe in the next section.

Data Limitations and Implications for Data Availability

Most of the data sets have adequate measures to continue to study the link between precollege achievement and access, with two exceptions. The NPSAS and BPS do not have adequate precollege measures of achievement such as high school grades and very few of the students in BPS reported their test scores (perhaps because many are nontraditional students) (St. John, 1996; Hurtado, et al., 1997). This is a serious omission that precludes good statistical controls for important studies and hinders our understanding of whether all talented students are gaining access to college opportunities and receiving financial aid. It also prohibits adequate evaluation of experiences during college. Fortunately, there are measures of college grade point average that allow researchers to study the link between aid and performance, but this cannot be evaluated adequately without previous controls for ability in NPSAS and BPS. In the first year of postsecondary data collection (1994), NELS:88 contained no college grade point average (not even a self-reported measure), an oversight that will hinder postsecondary studies currently conducted on NELS. Researchers will have to forgo studying college achievement until a measure is collected in the future, and will be limited to precollege achievement measures as statistical controls.

In order to better understand the broad concept of college participation, several researchers have also articulated the need for a richer set of measures that actually describe the college experience in more detail. We have learned much about access and participation from some strong single, regional, and multi-institutional studies of access and retention (e.g., Hossler and Vesper, 1993; Hossler and Stage, 1992; Pascarella and Terenzini, 1991), but the study of college participation can be greatly improved if some of the measures used in studies with a limited sample were incorporated into a longitudinal survey with a nationally representative sample. Better college experience measures are needed to evaluate the joint effects of aid and social and academic experiences on college participation after entry (St. John, et al., 1996). While BPS and NELS currently have some measures of contact with services, faculty, and peers, these remain quite limited. St. John (1990) has also suggested that actual financial aid transcripts from the institutions be merged for each of the students (in reference to HS&B) to avoid reliance on student self-reports. Now that NELS has begun its college level data collection, it may be possible to consider such a strategy from the institutions for one year or more. While this was the key purpose of NPSAS, both NPSAS and BPS lack the rich precollege experience measures that have helped researchers untangle the effects of early educational experiences from college effects. Specifically, we cannot understand the college experience when using federal data without more adequate measures of the transition to college, social interaction in social and academic contexts (appropriate to both nontraditional and traditional students), student perceptions of the environment (inside and outside of the classroom), and student reports of faculty expectations.

Some of the articles annotated here are examples of creative merging of data to understand institutional effects or variation by institution. Researchers are left to their own devices in attempting to introduce a greater number of institutional characteristics in their studies to explore variations between institution types, including selectivity, and the effects of enrollment, high resource institutions, etc. Given

the great differentiation in the higher education system, it seems appropriate to both expand the college characteristics of IPEDS data (to include measures of selectivity and tuition for example) and develop a useable trend file. This would permit a broad investigation of open admissions as well as selective admissions institutions. Further, linking institutional data with student data bases (NELS and BPS) before licensing the data would enrich the student data bases with institutional characteristics and speed the pace of research.

College choice studies and their general framework (Hossler and Gallagher, 1987), suggest that there are several missing areas in understanding the college choice process in most of the data bases. These include more details about the institutional actions that make students aware of college opportunities and how students conduct their search for colleges (if at all). One study suggested that it was important to understand why adults decide to go to college (or students return to college after having left), particularly since these students have some experience in the labor market and are not likely to be influenced by institutional recruitment aimed at college-age youth (Bers and Smith, 1987). As stated earlier, we need to collect more national data about students' intentions for coursework, and their varied reasons for attending and leaving institutions in order to understand college attendance patterns (Grubb, 1989).

College attendance patterns and extended time to degree suggest that longitudinal data collections remain essential. Determining when students may decide to partake of postsecondary education, when they will transfer, or how long they will stay until degree completion will not be possible without an ongoing longitudinal assessment of students' behaviors in higher education. Improvements in measures about students' college experiences will help us determine why such patterns occur among certain populations and whether new strategies for equalizing opportunity can be introduced in the future.

Drawing from observations gathered through this literature review process, we conclude this summary with a few key issues raised by researchers studying access to postsecondary education that have methodological implications for future data collections. The NPEC panel on access may want to visit these issues and add others that arise during the panel's meeting this fall. Research on access might be improved in the future if attempts were made to:

- Study equality of access by tracking group differences (racial/ethnic, gender, SES, regional, etc.) and changes in aspirations and actual attainment (including better samples of Native Americans);
- Observe changes among particular groups who are less likely to gain access immediately after high school (e.g., adult students, Hispanics);
- Develop more survey items that are built from theoretical constructs in college choice and persistence models;
- Track college participation using both survey and transcript data over a longer period of time (6-8 years) to reflect the continually changing patterns of access and retention displayed by contemporary patterns of college attendance;
- Incorporate items that capture students' experiences at both ends of the continuum of access to college (from highly selective to open admissions institutions);

- Collect more national data about students' intentions for coursework and their varied reasons for attending and leaving institutions;
- Develop a trend file linking IPEDS data with additional variables, such as selectivity and tuition across time, that could be easily linked with student data; and
- Begin collections on new cohorts that have both a rich set of pre-college measures *and* a rich set of measures of the postsecondary experience.

Table A-1. Bibliographic Databases and Search Terms Used in Connection with Access

Search term	ERIC Database # of entries downloaded	# of original hits	Sociofile Database # of entries	Psychlit Database # of entries	Dissertations # of entries	Baker and Velez Review # of entries	GRAND TOTAL
Aspiration	25	(243)	5	9	2		
Predisposition	5	(43)	1		1		
Personal goal	2	(19)	5	1			
Eligibility	11	(293)		2	1		
Preparation	17	(261)		1			
Finance/Financing	14	(353)	3	3	6		
Price response	9	(9)					
St. John	9	(9)					
Transfer	7	(199)	8		1		
Grubb	19	(35)					
Geography/geographic	11	(411)		4	3		
Owings	3	(3)					
CPEC	8	(37)					
BPS	3	(3)					
HS&B	37	(37)					
NELS	5	(5)					
NLS-72	12	(12)					
NPSAS	4	(4)					
Bibliography citations						15	
TOTALS	201	(1976)	22	20	14	15	272

Table A-2. Glossary of Postsecondary Data Sets from the National Center for Education Statistics

Name of Data Set	Description and Website
National Longitudinal Study of the High School Class of 1972 (NLS-72)	The NLS-72 has a time frame of sixteen years and focuses on the transition from high school to college and/or to work. A unique characteristic of this data set comes from the sampling strategy, which is designed to include both college attendants and non-attendants. Other survey studies under review gathered data from either high school students or college students, which may impinge on statistical inference of college impact on students due to the selection bias. The first wave of data collection began in 1972 with a 12th grade cohort, and includes follow-ups in 1973, 1974, 1976, 1979, and 1986. Website: http://www.ed.gov/NCES/surveys/nls72.html
High School and Beyond Longitudinal Study (HS&B)	HS&B is comparable to NLS-72 in terms of its data structure. It attempted to collect the same type of data gathered in the NLS-72, with newer elements of the educational process. HS&B provides information on educational, vocational, and personal development, and on the transition from high school to postsecondary education or the workforce. It includes a sophomore cohort as well as a senior cohort in 1980. Data collections for the follow-ups were undertaken in 1982, 1984, 1986, and 1992. Website: http://www.ed.gov/NCES/surveys/hsb.html
National Education Longitudinal Study of 1988 (NELS)	The NELS provides trend data on the transitions students encounter as they progress through their elementary, secondary, and postsecondary education or the work force. The NELS is also comparable to the NLS-72 and HS&B in terms of data structure. It began in 1988 with 8th grade students, and follow-up studies were conducted every two years until 1994. Website: http://www.ed.gov/NCES/surveys/nels88.html
National Postsecondary Student Aid Study (NPSAS)	NPSAS is a cross-sectional data set. It is a comprehensive nationwide study of students enrolled in less-than-two-year institutions, community and junior colleges, and four-year colleges and universities. Undergraduate, graduate, and first-time professional students who receive financial aid, as well as those who do not receive aid, are included in the sample. A large portion of the data set consists of financial information. The NPSAS also includes information on employment and educational aspiration. Data collection began in 1986, and was repeated every three years. Website: http://www.ed.gov/NCES/surveys/npsas.html
Beginning Postsecondary Student Longitudinal Study (BPS)	The BPS focuses on student persistence, progress and attainment. It began in 1990 as a longitudinal component of the NPSAS with beginning students in college. Its sample size is approximately 7,900 first-time postsecondary students in 1990, and these students were followed-up in 1992 and 1994. A unique feature of BPS is that it includes "non-traditional" students, or a heterogeneous sample of students by age. Website: http://www.ed.gov/NCES/surveys/bps.html

Section II: Annotated Bibliography
(listed in topic and alphabetical order by author)

I. Financial Aspects of Access:

Heller, D. E. (1997). Access to Public Higher Education, 1976 to 1994: New Evidence from an Analysis of the States. Unpublished doctoral dissertation, Harvard University, School of Education, Cambridge, MA.

This thesis expands on and supplements earlier literature on higher education pricing and student enrollment by examining the relationship between public tuition prices, state need-based grant spending, and public college enrollments. Trends in tuition prices, public college enrollment, and state grant spending are first examined nationally and for regions of the country. A panel dataset then is used to fit fixed-effects models of enrollment behavior in the 50 states from 1976 to 1994. A particular emphasis is placed on differences in enrollment behavior among four racial/ethnic groups (Asian-American, African-American, Hispanic, and White students), as well as between college sectors, year in college (freshmen versus all undergraduates), and attendance status (full-time versus part-time). Data analyzed for this dissertation stems from a variety of sources, including: the Integrated Postsecondary Education Data System (IPEDS) from the National Center for Education Statistics, the U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, the National Association of State Scholarship and Grant Programs, and the Washington State Higher Education Coordinating Board.

Results from the investigation reveal the following: 1) increases in tuition lead to declines in public enrollments, *ceteris paribus*, with community college students more responsive than those in 4-year institutions, and all undergraduates more responsive than first-time freshmen students; 2) decreases in state grant spending lead to declines in enrollment, with the effect largest among community college students and first-time freshmen; 3) African-Americans and Hispanics are more sensitive to tuition increases than White students, but Asian American students exhibit the largest enrollment response to tuition increases; 4) the enrollments of the three minority groups, in general, respond more to changes in state grant spending than does that of White students; 5) African-American first-time freshmen have a higher sensitivity to tuition increases than the enrollment of all African-American undergraduates, but first-time White, Hispanic, and Asian American freshmen respond less to tuition increases; and 6) part-time students tend to be more sensitive to tuition increases than full-time students with part-time students in community colleges exhibiting the highest tuition sensitivity, but part-time students tend to respond less to changes in state grant spending.

The author concludes with several recommendations, including advocating an increased coordination of tuition policies across different types and levels of postsecondary education within states financial aid offerings in order to meet rising tuition costs. As an outgrowth of this discussion, the author gave two recommendations: 1) that one way to ameliorate the disparate effects among the racial/ethnic groups would be to target financial aid toward those groups who are most sensitive and in need of aid–such as Asian Americans and Hispanics in community college; and 2) that financial aid packages might be "front-loaded" to students in their first or second years of undergraduate study, since freshmen in the study seemed to be the most heavily influenced by state grant funding. However, the author notes that with the recent debate on race-based affirmative action programs and the declining emphasis in state funding of higher education, these recommendations may not be seen as favorable in state policy arenas. Available from Dissertation Abstracts or from author. (Adapted from author's text.)

(Also Personal Aspects of Access; Race/Ethnicity):

Kane, J., and Spizman, L. M. (1994). Race, financial aid awards and college attendance: Parents and geography matter. American Journal of Economics and Sociology, 53(1), 85-97.

This study 1) examines the contribution of race and other characteristics in explaining differences in financial assistance; and 2) investigates the effect of a student's race on the probability of attending college, holding other factors constant. A sample of 6,332 individuals in the National Longitudinal Study of the High School Class of 1972 who participated in the base year through the fifth follow-up surveys were analyzed using both probit and tobit analyses. Based upon the conceptual framework of Manski and Wise (1983), the following variables were used to explain the amount of education and financial aid awards received for each individual in the study: income, SAT scores, race, parents' education, rank in high school class, number of siblings, siblings in college, and geographical location.

Probit estimates indicate that higher 1) numbers of siblings in college; 2) SAT scores; 3) high school rank; and 4) level of parental educational attainment all increase the probability of attaining an education beyond the high school level for both males and females. In terms of racial/ethnic distinctions, both African-American men and women, net of all the other independent variables, had a higher probability of attending college than White youth. Regarding geographical location, residents from both the South and Northeast were more likely to attain a higher education than their counterparts, but rural students were significantly less likely to attain higher levels of education. Tobit analyses reveal that those with high SATs and high school ranks, a greater number of siblings, and leadership activities in high school are more likely to receive larger grants than their comparison groups. Again, it was found that African-American males and females had a higher probability of receiving larger grants than Whites.

The author concludes that since African-Americans receive larger financial aid awards and have a higher probability of attending college, colleges and universities have successfully used affirmative action programs to attract African-American students. Instead, the low average of college attendance rates for African-Americans appears to be the result of socio-demographic characteristics, such as income, education, and geographical location. This indicates that when these socio-demographic characteristics are held constant, an African-American high school graduate is more likely to attend college than is a White high school graduate. However, the authors do note that the factors under which minority students live are not always of equal parity with their majority counterparts. Nevertheless, the implications of these findings suggests that financial aid policies are effective in recruiting African-American students, and that such policies should remain intact for continued access. Available from the American Journal of Economics and Sociology. (Adapted from authors' text).

Ordovensky, J. F. (1995). Effects of institutional attributes on enrollment choice: Implications for postsecondary vocational education. Economics of Education Review, 14(4), 335-50.

This paper examines the postsecondary enrollment decisions, including decisions to attend trade schools or vocational programs, of individual high school graduates with particular focus on the effects of institutional cost and proximity. Using data from the High School and Beyond Survey of 1980 high school seniors (n=5,691), a multinomial logit model of enrollment probability is estimated. Results suggest that students who choose two-year colleges for academic purposes are a significantly different

group than those who choose the same institutions for vocational reasons. For example, 2-year college vocational enrollments are more sensitive to changes in cost than to changes in distance (while the reverse is true for 2-year academic enrollments). In addition, the findings indicate that changes in accessibility of 2-year schools may affect enrollments in 4-year institutions. The elasticity estimates reveal that increasing the accessibility to 2-year schools will draw some students away from 4-year colleges. Implications from these findings suggest that increased 2-year enrollments stimulated by lower costs may come primarily from students who would otherwise have chosen a 4-year college while higher two-year enrollment probabilities generated by greater proximity may be more likely to draw students who would otherwise have chosen nonenrollment. Other findings infer that tracking continues in 2-year colleges, and that the correlation between pursuing academic tracks in high school and academic programs in postsecondary education are strong (the same being true for high school vocational tracks and postsecondary vocational programs). Finally, while this research and similar studies have found that African-American students have a higher probability of enrolling in 4-year institutions, the direct implications are that socioeconomic status and high school preparation are better predictors of such enrollment than race, *per se*. Available from Economics of Education Review. (Adapted from author's abstract and text.)

(Price response):

St. John, E. P. (1990). Price response in enrollment decisions: An analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 31(2), 161-76.

This study uses the High School and Beyond sophomore cohort of 1982 (n=4,338), to analyze the effects of the amount of tuition charged and aid offered on student enrollment decisions. Prior research in price-response has primarily concentrated upon how tuition increases affect subsequent enrollment, but has failed to take into account the influence of Pell Grants and new financial aid policies. Findings from the study include the following: 1) all forms of financial aid–grants, work, and loans–were effective in promoting enrollment; 2) one hundred dollars of aid (any type) had a stronger influence on enrollment than a one-hundred-dollar reduction in tuition; 3) low-income students were more responsive to increases in grant aid than to increases in loans or work study; and 4) high-income students were not responsive to changes in aid amounts. Important implications from these results include the fact that financial aid is a major influence on students' price-response decisions, and that students–especially those from racial/ethnic minority groups–are responsive to all types of aid, including loans. As long as postsecondary institutions continue the "high tuition/high aid approach to college financing, institutions must remain cognizant that increases in tuition must be accompanied by increases in financial aid if such institutions are interested in maintaining current enrollments. Available from the Research in Higher Education. (Adapted from author's abstract and text.)

(Price response; Also Personal Aspects of Access; Race, Preparation):

St. John, E. P. (1991). What really influences minority attendance? Sequential analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 32(2), 141-58.

This article examines how enrollment decisions by African-Americans and Hispanics differ from enrollment decisions by Whites and Asian Americans, and uses two sets of logistic regressions: one

considering attendance decisions by all the members of a senior high school class, and one considering attendance decisions by college applicants in the class. For researchers interested in a summary of findings regarding the use of national data in examining factors that influence minority enrollment and participation in higher education, the author provides such a synopsis in the background section of this article. This analysis uses the High School and Beyond (HS&B) sophomore cohort (n=5,115) from the class of 1982. Results indicate that the college attendance behavior of African-Americans and Hispanics differ from other high school students. When only region, background, test scores, and high school experiences are considered, African-Americans are more likely to attend college. However, when postsecondary plans are also considered, being African-American is no longer positively associated with college attendance. Therefore, having high postsecondary aspirations appears to mitigate, at least partially, the impact of poor preparation for African-American high school students. Yet, African-American applicants are less likely to attend college than other applicants, thus aspirations alone are not sufficient to overcome poor academic preparation. Hispanics, in contrast, are not as likely to attend college as African-American or other students. When only region and social background are considered, Hispanic high school seniors are less likely to attend college. In addition, when indicators of academic preparation are considered, once again Hispanics are found to be less likely to enroll in college, which suggests that poor academic preparation as well as low educational aspirations combine to further widen the gap in Hispanic postsecondary attendance. Consistent with prior research on student access, three factors are identified that can potentially improve college attendance by minority students: 1) improved academic preparation in elementary and high school; 2) increased aspirations for higher levels of educational attainment; and 3) increased levels of financial aid. Public interventions that would improve any of these factors for minority high school students are likely to improve minority participation rates. Available from the Research in Higher Education. (Adapted from author's abstract and text.)

(Also Cultural Characteristics):

Steelman, L. C., and Powell, B. (1993). Doing the right thing: Race and parental locus of responsibility for funding college. Sociology of Education, 66(4), 223-44.

One of the more unflattering reasons posited as to why minority groups still encounter obstacles to higher education has to do with the perception that minority parents are overly dependent on governmental aid and correspondingly lacking a sense of financial responsibility for their children's education. As this article documents, previous research shows that minority groups' attitudes are generally more receptive to social welfare programs than are White Americans. Two explanations have been given for this phenomenon: 1) that minority acceptance of governmental aid programs stems from simple self-interest, or the notion that individuals who stand to gain the most from a program will be the most likely to support it; and 2) that individuals tend to identify with a generalized experience of the racial group to which they belong, which translates to minority group members closely identifying and sympathizing with the troubles that have afflicted their fellow group members, and collectively agreeing that governmental social welfare programs should work to rectify these past injustices. This research compares the responses of minority versus White parents to questions regarding where parents locate the responsibility for funding college (parent, student, or government), whether they favor specific governmental funding strategies, and whether they have saved for their children's education.

The authors analyze parent responses to questions about financing their children's postsecondary education from both the High School and Beyond Study (HS&B) and National Educational Longitudinal Study of 1988 (NELS). Although racial variations are modest and the percent of variance explained is often low, the results indicate that minority parents are not only more receptive to

governmental involvement than are White parents, but are also more likely to place the financial burden of financing their children's education on themselves. Self- and collective-interest theorists would not be surprised by the fact that minority parents are more supportive of governmental aid than White parents, but the self-interest argument fails to explain why these same minority parents also believe–more strongly than White parents–that the locus of financial responsibility for their children's education is on themselves. These findings suggest that support for governmental aid for higher education transcends pure self-interest and corresponds more closely with a collective minority-status argument, in which minority parents understand their responsibility to their children but feel that social redistributive measures should remain in place to ensure access to higher education for those who were previously excluded. Once background characteristics are held constant, minority parents make at least as much if not more of an effort to save for college as do their White counterparts. Most important, these results debunk the myths that 1) minority parents lack responsibility for their offspring, at least with respect to educational investment, and that 2) a group's endorsement of collective welfare is incompatible with its assumption of individual responsibility. Available from the Sociology of Education. (Adapted from author's abstract.)

II. Personal Aspects of Access

Gardner, J. A. (1987). Transition from High School to Postsecondary Education: Analytical Studies. Contractor Report. Washington, DC: Superintendent of Documents, U.S. Government Printing Office.

This study focuses on the factors affecting access to postsecondary education for college-age youth, with primary emphasis given to identifying those aspects of personal background and institutional policy that influence educational aspirations and postsecondary enrollments. Also examined are the relative influences of family income and availability of financial aid on decisions to attend postsecondary education. Data were primarily derived from two databases: the High School and Beyond (HS&B) Study and the National Longitudinal Study of the High School Class of 1972 (NLS-72).

The primary strengths of this piece are its ability to chart trends over a decade (1970s to 1980s) and the comprehensive use of NCES data on access. The author divides his findings into four groups: educational expectations, postsecondary attendance, school and program selection, and sources of financing. Researchers interested in comparing the availability of certain variables related to access in either or both the HS&B and NLS-72 will find this report a useful resource.

Under educational expectations, general results show that student aspiration levels have not changed substantially from 1970 to 1980. However, females, higher academic achievers, students from a high SES, students in high school academic tracks, and African-Americans were more likely to aspire to higher levels of education in the 1980s. As for postsecondary attendance, rates of attendance or enrollment immediately following high school graduation have fallen over the last decade. Attendance seems to be more sensitive to academic performance than to social status of the family; thus, superior academic performance does permit students from low socioeconomic status backgrounds to attain access to a postsecondary education. For most prospective students, academic characteristics are more important in selecting a postsecondary school than are financial demands, social opportunities, or proximity of the school to one's home. An analysis of the sources of financing reveals that different students use different types of aid. African-Americans of either gender are heavily dependent on financial aid (and are the most frequent users of Pell Grants), followed by Hispanics and finally by Whites. Families with middle incomes are more likely to use loans than are those from other income categories. However, while

Whites most frequently depend on Federally Guaranteed Student Loans (GSL), other types of loans (such as regular bank loans, state loans, and loans from family or friends) exhibit no clear pattern of use by race/ethnicity, gender, income, or academic ability.

The author concludes that a substantial degree of equity in access to American postsecondary education exists since students with high aptitude are attending college at roughly equal rates, regardless of race/ethnicity, gender, or socioeconomic status. However, since the author performed bivariate comparisons, one is not able to discern the relative effects of a combination of factors on access to higher education. Document is available for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Library of Congress number: LA 227.3 .G3611 1987. (Adapted from author's text.)

Hearn, J. C. (1988). Determinants of postsecondary education attendance: some implications of alternative specifications of enrollment. Educational Evaluation and Policy Analysis, 10(2), 172-85.

This paper proposes four defensible alternative definitions of "postsecondary education attendance," then uses data for high school seniors to examine influences on attendance under each of the definitions. These definitions correspond with five hypotheses regarding the impact of an enrollment model that includes measures for student background (race/ethnicity, gender, SES, number of siblings) and academic characteristics (high school curricula program, high school grades, and test scores) in relation to various definitions in enrollment. The dependent measures include attending a 2- or 4-year college immediately after high school, attending a 2- or 4-year college at least one year after high school, attending any type of postsecondary institution immediately after high school, and attending any type of postsecondary institution at least one year after high school. The High School and Beyond data for 1980 high school seniors and a 1982 follow-up (with a sample of 8,594 students) were used to study influences on attendance under each definition.

Results show that broader definitions of college attendance correspond with higher percentages of students attending college (62% of the sample attended some type of college at least a year after high school but only 46% of the students attended a 2- or 4-year institution immediately after high school). The results suggest that these influences vary somewhat, depending upon the enrollment definition one chooses. For example, the findings suggest that studies focusing solely upon a traditional definition of enrollment (e.g., entry into a 2- or 4-year institution immediately after high school graduation) may overstate the limiting effects of socioeconomic factors on overall enrollment, and may also understate the positive effects of being female. That is, using the broadest definition (access to any type of institution at least one year after high school), women attend college at somewhat greater rates than men. Similarly, there is more variability in student SES when the broadest definition is used to understand access. Therefore, the higher education system appears both less class-based and more open to women when enrollment in postsecondary education is broadly defined. Further, results show that enrollment advantages of African-American and Hispanic youth are activated in large part within the academic context (i.e., when controls are introduced for test scores, grades, and curriculum). The author suggests, however, that such academic characteristics may be determined by economic background. Some policy studies make recommendations on the basis of analysis using traditional enrollment definitions, even though such definitions are much more restricted than those of the major financial aid programs (e.g., the Federal Pell Grant program). In attempting to understand whether the U.S. system of postsecondary education is equitable, the author cautions that a stratified hierarchy of resources among institutions should not be ignored. Further, "in the contest for ability and status in society, access to a

barber college ... is far from equivalent as access to a Berkeley or Wisconsin (p. 182). The findings of the study suggest that such studies that ignore varying definitions of access may incorrectly estimate policy impacts. Available from Educational Evaluation and Policy Analysis. (Adapted from the author's text).

(Race/ethnicity):

Hauser, R. M., and Anderson, D. K. (1991). Post-high school plans and aspirations of Black and White high school seniors: 1976-86. Sociology of Education, 64(4), 263-77.

This national study reminds us that progress among some minority groups is tenuous and changes may be difficult to explain because they may be responsive to changes in the larger social and policy context. Specifically, the chances of college entry declined among African-American Americans from 1977 through the mid-1980s, absolutely and relative to those of Whites. The study explored African-American and White students plans and aspirations from 1976 to 1986 to determine if this decline in college entry could be explained by changing student goals for postsecondary education. The study is unique in that it explicitly distinguishes between students' plans/expectations and students' aspirations. Plans/expectations are measured as realistic post-high school intentions. Plans include intentions to seek vocational training, attend the military, attend college (two or four-year), and graduate with a degree (from a two or four-year college). Student aspirations are expressed as desired outcomes that are not limited by constraints of resources; the study uses measures of aspirations that ask students to identify post-high school activities they would want to do if "nothing stood in their way.

The Monitoring the Future (MTF) surveys some 15,000 to 19,000 high school seniors each year in approximately public and private high schools and has monitored students' plans and aspirations since 1975. The study used data on 138,000 seniors from 1976 to 1986. Upward trends observed over the ten year period in aspirations and plans among African-Americans, but not among Whites, were driven by favorable changes in social background. Annual measurements from the MTF surveys show no trends among African-Americans' or Whites' plans to attend technical/vocational school, nor trends in plans or aspirations to complete a 2-year college program. During the decline of college entry for African-Americans, both plans and aspirations to enter the armed forces increased among African-Americans and Whites, but the increase in plans was larger among African-Americans than among Whites. Both plans and aspirations to complete a 4-year college program also grew among African-Americans and Whites, and the increase in plans was smaller among African-Americans than among Whites. However, these changes in aspirations among African-American high school seniors cannot account for the decline in their chances of entering college during the 1980s. The implication of the study is that declines in enrollment cannot be attributed to significant shifts in African-American student plans or aspirations for college. They suggest in light of African-American students' continued plans and aspirations for college, the enrollment decline might best be explained by other forces including changes in financial aid policy or the labor market. Available from Sociology of Education. (Adapted from the author's text).

(Race/ethnicity):

Hurtado, S., Kurotsuchi Inkelas, K., Briggs, C., and Rhee, B.-S. (1997). Differences in college access and choice among racial/ethnic groups: Identifying continuing barriers. Research in Higher Education, 38(1), 43-75.

This study focuses on the college application behaviors of students from various racial/ethnic groups in order to understand differences in access and college choice. Changing policies in higher education make it appropriate to monitor and reexamine access for different racial/ethnic groups particularly in light of rising standards in high school and changing postsecondary admissions standards, increased reliance on student loans coupled with rising tuition costs, sharp cuts in budgets for secondary and postsecondary institutions, and actions to prohibit the consideration of race/ethnicity as a criterion in college admissions. Utilizing the Hossler and Gallagher (1987) college choice model, the authors examined the predisposition phase (10th and 12th grade students thinking about the likelihood of attending postsecondary education), including preparation for college behaviors in 12th grade (test-taking) among all students and high ability students (performers in the top quartile of 8th grade standardized cognitive tests) from different racial/ethnic groups. The search phase was investigated to determine the number of applications students submitted as an indicator of strategic college planning. The choice phase of the model was also investigated by reviewing the characteristics of students who indicated they had gained admission to their first choice college.

Student characteristics, predispositions, academic abilities, and income levels were taken into account in multivariate analyses which included ordinary least squares regression for investigating the number of colleges students applied to during the 12th grade. Logistic regression was used to determine the characteristics of students admitted to their first choice college. Data from the National Education Longitudinal Study (NELS:88) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92) were used as a complementary analysis. Both data sets capture trends in preparation for college among students entering higher education in the 1990s, with the BPS reflective of non-traditional students in college.

Results indicate that most secondary school students expect to obtain some type of postsecondary training and these expectations increase by the end of 12th grade. However, significant group differences were detected in preparation behaviors, college application behaviors (number of colleges to which students applied), and attendance at their first choice of institution. Specifically, it appears that Asian American students are best prepared for college and are most likely to enter college immediately after high school. They have the highest expectations for degree attainment, take standardized tests on time, and apply to the highest number of colleges. Despite high application submittals, they are not significantly more likely than White students to state they will be attending their first choice institution, a fact which might reinforce the behavior of applying to more colleges. In contrast, Latino students are least likely to engage in an extensive search and choice process. They have low degree aspirations, are least likely to enroll in college immediately after high school, and apply to fewer colleges than students from other racial/ethnic groups. High achieving Latinos fare somewhat better but are still least likely to attend college immediately after high school than other racial/ethnic groups. African-American students have high expectations for degree attainments. High achieving African-Americans are about as likely as White students to apply to 4-year colleges, and submit several college applications. However, after Latinos, they represent the next highest proportion of students who had not applied to college by the end of 12th grade and were significantly less likely than Whites to state they had been admitted to their first choice institution (controlling for other factors).

The results of this study suggest that each group faces unique problems in access and preparation for college that need to be addressed. Despite postsecondary expectations, a surprising proportion of the NELS cohort did not apply to college by the end of 12th grade or applied to only one college (ranging from 75% among Latinos to 44% for Asian Americans), indicating that the college choice model may be best suited in its assumptions for prepared students or students who come from higher socioeconomic backgrounds and have several college options from which to choose. Further, approximately 30 to 40 percent of high achievers (on 8th grade tests) had not applied to college by the end of 12th grade, suggesting that students are either delaying college entry or foregoing college. The authors suggest it is difficult to maintain an assumption of "all things being equal when evaluating college opportunities in the context of inequality (i.e., controlling for background characteristics that are unevenly distributed in minority populations). They urge campuses to continue early outreach activity and institutional evaluation of such programs, identify new strategies in an era of changing student aid policy and diminished affirmation action programs, and evaluate the potential effects of institutional policy decisions that may impact student choice for different populations of students. The authors also call for better precollege ability measures for controls in BPS and larger samples of Native American students in national data bases to examine their access and college choice behaviors. Available from Research in Higher Education. (Adapted from authors' abstract and text.)

(Nontraditional age):

Hearn, J. C. (1992). Emerging variations in postsecondary attendance patterns: An investigation of part-time, delayed, and nondegree enrollment. Research in Higher Education, 33(6), 657-87.

This research assessed hypotheses regarding several nontraditional styles of postsecondary enrollment: enrolling part-time, delaying postsecondary enrollment for a year or more beyond high school graduation, and entering nondegree-granting programs. Hypotheses suggest that such nontraditional enrollment may be related to ascribed roles (of women and racial/ethnic minorities), socioeconomic constraints (social class, financial concerns, family size), limited academic ability or academic marginality, or part of a pattern of nontraditionality. The research was conducted using a sample of 8,203 high school graduates drawn from the national High School and Beyond data set and multivariate analyses were used to assess the characteristics of nontraditional enrollees. The author used background measures (African-American/White, female/male, parental SES, family size) and academic measures (high school academic track, tested ability, high school grades) and educational aspirations to distinguish among students using 13 different attendance patterns (ranging from nonattendance to full time, immediate attenders at four year institutions) that reflected combinations of status (part-time or full-time), timing for attendance (delayed or immediate entry after high school), and type of institution (non-degree, 2- and 4-year). Logistic regression was also used to predict part-time attendance and delayed attendance using the same background and academic measures.

Among the findings is evidence that socioeconomically disadvantaged graduates have disproportionately pursued each of the nontraditional enrollment options, even in the context of controls for the respondents' differing academic characteristics. This indicates solid support for the socioeconomic constraint hypothesis. African-American students tended toward full-time course enrollment but were likely to attend later, or a delayed attendance-timing pattern (indicating a combination of both traditional and nontraditional attendance). Women were especially unlikely to delay enrollment and were about as likely as men to enroll part-time. This indicates mixed support for the influence of the ascribed roles hypothesis. The hypothesis of academic marginality was also supported: students choosing

nontraditional options had modest academic preparation, ability, and achievements. Lower academic ability students chose not to enroll in a college or chose to pursue non-degree granting institutions. The less academically gifted who did enroll were likely to attend part-time or delay college entry. Finally, the nontraditional hypothesis was not supported as only six percent of students pursued multiple (two or more) nontraditional college attendance patterns.

The author suggests further theoretical and empirical work to understand the many nontraditional forms of college attendance that are emerging in postsecondary education, including further specification of models to arrive at the reasons why students take such multiple paths or engage in stopping out behavior. Various enrollment patterns are not captured through accumulated years of education measures often used in relation to other variables in economic attainment models. The author warns that educational policy should not paint these nontraditional patterns in a negative light: nontraditional enrollment is, after all, enrollment and it represents access to the postsecondary system for many individuals who are not able to follow traditional patterns. Policymakers should be most concerned with whether students various styles of attendance result in diminished opportunities or human capital returns, and more importantly, how student aid may assist in a defense against the problem of socioeconomic factors playing an undue role in students' attendance choices. Otherwise, the role of socioeconomic disadvantage in limiting traditional attendance patterns will continue unabated. Available from Research in Higher Education. (Adapted from author's abstract and text.)

III. Preparation for Postsecondary Study

Owings, J., McMillen, M., and Burkett, J. (1995). Making the Cut: Who Meets Highly Selective College Entrance Criteria? Statistics in Brief, April 1995. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. (NCES 95-732)

This study used national data to categorize college-bound high school seniors in each of five criteria identified as representative of those required for admission to highly selective colleges. In an effort to identify well-rounded students from a single cohort, selected criteria included grade point average (GPA), Scholastic Aptitude Test (SAT) scores, courses taken, teachers' perceptions, and participation in two or more extracurricular activities. Although some non-academic criteria were employed, it should be noted that criteria remain weighted primarily towards academic criteria and therefore may not perfectly represent the range of criteria employed by selective institutions. On the other hand, the analysis should be credited with attesting to a somewhat broader range of criteria and their potential effect on the admission of different socio-demographic groups.

Data came from the National Education Longitudinal Study of 1988 (NELS:88), using a sample of 6,760 college-bound respondents with complete high school transcript data. Demographic and social characteristics of the college-bound seniors who met the highly selective criteria were examined and less restrictive criteria were considered as well. Findings indicate that only 5.9 percent of college-bound seniors met all five highly selective criteria of 1) a high school grade point average (GPA) of 3.5 or higher; 2) a score of 1100 or higher on the SAT; 3) a course pattern that included credits for four English, three mathematics, three science, three social studies, and two foreign language courses; positive teacher comments; and participation in two or more school-related extracurricular activities. Lowering cut points for SAT (950), GPA (3.0), and diminishing course requirements in each of the categories by one course resulted in only 19.5 percent of the 1992 college-bound seniors meeting this criteria.

Perhaps most importantly, evaluation of criteria in relation to student socio-demographic characteristics suggests that different groups may fare better in admission to selective colleges depending on the weight placed on each of the five criteria: More females than males excelled in grades (although males were more likely to score above 1100 on the SAT); the percentage of college-bound seniors who achieved GPAs of 3.5 or more and SAT scores of 1100 or more was higher for Asian American and White students than for Hispanic, African-American, or American Indian students; seniors from high socioeconomic backgrounds were more likely than their contemporaries at other status levels to meet any of the selective criteria; and about one-half of college-bound seniors attending schools identified as "all other private schools" scored 1100 or higher on the SAT while about 20 percent of their peers at public and Catholic schools achieved this level. It was also noted that not all high schools (even independent high schools) offered the curriculum in the selective criteria. Implications suggest that parents and students should become aware of admissions criteria early enough to select the right courses to gain college admission. Available from the U.S. Government Printing Office: 1995 - 393-856 - 814/30387 or first author Jeffrey Owings (202) 219-1777. (Adapted from authors' text.)

IV. Geographic Concerns *(Also Personal Aspects; Race/ethnicity):*

Paul, F. G. (1990). Access to college in a public policy environment supporting both opportunity and selectivity. American Journal of Education, 98(4), 351-88.

This research examines patterns of enrollment, choice and degree attainment for potential college students from five of the nation's largest metropolitan areas (Atlanta, Chicago, Houston, Los Angeles, and Philadelphia). Using both HEGIS and IPEDS data as well as information from state departments of education for high school graduates, the author compares percentages of African-American, Hispanic, and White high school graduates in each of the five areas to percentages enrolled in higher education institutions in those areas during three time points: 1980, 1984, and 1986. In addition, the author breaks down racial/ethnic minority postsecondary enrollment by type (Carnegie classification) and selectivity (Barron's). Results show that the opportunities available through the public colleges and universities have been most important for all groups of students and that a higher proportion of comprehensive colleges and universities in the public sector, a higher proportion of campuses in the "competitive" and "less competitive" admissions categories (fourth and fifth highest on a six-point scale), and a smaller percentage of community colleges are associated with greater access and bachelor's degree attainment for all students, and particularly for minority students. However, Hispanic enrollments in all five metropolitan areas was found to be the most at-risk, given the fact that postsecondary enrollment for Hispanics was not keeping pace with increasing numbers of Hispanic high school graduates. Similarly, African-American enrollment in most of the areas decreased in proportion to increases in the eligible population, while White enrollment in all types and selectivities of higher education seemed to be greater than the proportion of eligible high school graduates, intimating that access to postsecondary education is being met for these students. These findings point to the critical gap experienced by racial/ethnic minorities in major metropolitan areas in terms of enrollment in postsecondary education, which the author states as proof that–despite rhetorical questioning to the contrary due to increases in overall minority participation–differences in higher education opportunity still exist. Available from the American Journal of Education. (Adapted from author's abstract.)

V. Cultural Characteristics of Students

McDonough, P. M. (1994). Buying and selling higher education: The social construction of the college applicant. Journal of Higher Education, 65(4), 427-46

This is a qualitative study of students' college application strategies in an increasingly competitive admissions environment. Although college access may be considered easier today, it is also harder for students to get into the "right college because of increased competition and standards. The author illustrates how access is not simply a question of attending college, particularly for high SES groups, but more accurately a question of the type of college one is able to gain access to that may be commensurate with one's economic and cultural capital (or presumed "birthright). The qualitative data is based on field work, interviews, and review of literature that focused on a larger study of working class and upper-middle class students from four California high schools. Results generated from students and parents at two high-SES high schools are presented as the basis for the observed phenomenon. The sample was further restricted to White female, middle-range academic performers. An era of heightened competition for particular colleges, complex college processes, and diminished high-school guidance operations (in California), converge to create intense pressures for students and parents. High-SES families have mobilized to secure and maximize their socioeconomic advantages through the use of private counselors that offer specialized assistance, provide private counseling time, help applicants organize and manage the application process, and cool out unreasonable aspirations by presenting viable alternatives. Interviews suggest that even high-SES parents are concerned and panicked about what appears to be a complex process, have lost confidence in their schools to provide adequate service, and want to find assistance in "packaging" their daughter (with low test scores) to be a more appealing applicant. Student interviews also reveal that students use SAT coaching, want personalized assistance, and found the private counselors' help a relief in removing some of the pressures of organizing the college search and application process. The emotional stress of the college choice process among high-SES students and parents was evident. In short, the economic investment to position their children for a good education comes naturally to these families as does outsourcing important services that parents may not have the time or ability to perform. Implications suggest that the college choice process has become a growth industry of services geared toward upper-middle class college aspirants and that working class students may be left further behind in the race for a space in particular colleges. Available from the Journal of Higher Education. (Adapted from author's text.)

VI. Transitions Between Levels and Types of Postsecondary Institutions

Grubb, W. N. (1989). Access, Achievement, Completion, and "Milling Around" in Postsecondary Vocational Education. Berkeley, CA: MPR Associates.

Through comprehensive use of NCES data on students, the author provides compelling information regarding students' postsecondary attendance habits, particularly in vocational education (public and private). The study analyzes the results of the increased access of students to postsecondary vocational education, especially in 2-year colleges, in terms of course credits, completion rates, and job placement. Data from both the 1980 High School and Beyond (HS&B) and the National Longitudinal Study of the High School Class of 1972 (NLS-72) were examined (including college transcripts for course credits and degree completion), and bivariate and limited multivariate analyses were conducted in a wide range of areas. The data show that enrollment in postsecondary vocational programs increased substantially more than enrollments in 4-year colleges and were especially high among females, students of low socioeconomic status, and students from vocational tracks. Groups that experienced expansion in

higher education enrollments (such as Hispanics) did not gain access in appreciably larger proportions, with the exception of women. Once ability and socioeconomic status are controlled, there is no apparent deterioration in the access of minorities to higher education. The author states that expansion of the vocational tracks in postsecondary education has contributed to increased access. Regarding student progress, dropout rates are especially high for students entering community colleges, technical institutes, and private vocational schools, among whom the dropout rate is 50 percent. Hispanics and African-Americans are more likely than White students to leave postsecondary education without completing any type of program. In terms of transfers among institutions, results show that transfer rates from 2-year to 4-year institutions have decreased. Although transfer slows the rate of progress in higher education, students attending three or more institutions are more likely than those attending one or two institutions to complete degrees. The implication is that some goal-directed students take what they need from a variety of postsecondary options to achieve a degree. Noncompleters tended to earn relatively few credits. Late entrants into higher education were more common in private vocational and public technical institutes than in 4-year colleges.

The study found that although access to postsecondary education has expanded, some of the increased enrollment may serve no purpose if students are "milling around" without clear goals. Many students act like "experimenters", taking a variety of unrelated courses without earning many credits and then leave for employment that is not closely connected to their coursework. As students stay longer in vocational programs and accumulate credits, they appear to develop more coherent programs and have a greater chance of obtaining employment related to their education. The author concludes by stating that given the fluid nature of attendance, it is difficult to determine who really is a dropout (even with longitudinal data) and whether "experimenters" learn what they need to know or leave still unprepared for the labor market. Better information about student intentions, vocational goals, and reasons for leaving postsecondary education are needed in longitudinal data sets. (In addition to 16 tables in the text, the document includes an appendix of technical notes and 48 tables comprising the greater part of the over 400 page document.) Available from the author or MPR Associates, 1995 University Avenue, Suite 225, Berkeley, CA, 94704, (415) 849-4942; not advisable to duplicate from ERIC document fiche. (Adapted from author's text.)

Grubb, W. N. (1991). The decline of community college transfer rates: Evidence from national longitudinal surveys. Journal of Higher Education, 62(2), 194-222.

This article attempts to find the reasons behind the decline in transfer rates from 2-year to 4-year institutions from the 1970s to the 1980s by using longitudinal data from both the National Longitudinal Study of the High School Class of 1972 (NLS-72) and the High School and Beyond (HS&B) Study. The first section of the article presents information on trends in overall transfer rates among the classes of 1972 and 1980, and decomposes the overall transfer rates into several components. The second section presents the same transfer rates but broken out into more detail by several socio-demographic and academic characteristics, such as gender, race/ethnicity, family background, high school performance, and postsecondary aspirations. Section three presents information on the eventual educational attainment (i.e., baccalaureate) of the 1972 and 1980 transfer students, and section four outlines the implications of the results. The results from the NLS-72 and HS&B data reveal that transfer rates from 2-year to 4-year institutions have declined over the 1970s-1980s, and that this decline can be at least partially explained by a number of causes, or "deaths by a thousand cuts" (p. 213).

Results from section one show that rises in vocational programs pursued by students in community colleges, as well as fewer students attaining the academic associate degree as a route to 4-year

colleges, contribute to a smaller pool of community college students who possess enough credits appropriate for transfer to a 4-year college or university. In addition, the author finds that the amount of students who enter community colleges as "experimenters," or those who attend 2-year institutions in order to get their "feet wet" in the postsecondary realm by dabbling in a few courses, doubled from 1972 to 1980. Finally, the author notes that, consistent with previous research in this area, demographic and academic characteristics such as being female, being from a racial/ethnic minority group, being of low socioeconomic status, being from general or vocational as opposed to academic tracks in high school, and having lower prior academic achievement all contribute to the accumulation of fewer community college credits, which in turn adds to the decline in transfer rates to 4-year schools. The author concludes that while many efforts to improve transfer rates, some of which include better articulation policies and collaboration among neighboring 2- and 4-year institutions, are designed with the best intentions, several of the problems related to the decline stem back to personal characteristics and lack of direction on the part of the students. Available from the Journal of Higher Education. (Adapted from author's text.)

Lee, V. E., and Frank, K. A. (1990). Student characteristics which facilitate transfer from 2-year to 4-year colleges. Sociology of Education, 63, 178-93.

Advocates of community colleges argue that these institutions offer an alternative source of access to higher education to socially disadvantaged and academically ill-prepared high school graduates who would otherwise be impeded–for either financial or academic reasons–from attending 4-year colleges. Yet, critics have asserted that, although 2-year colleges have increased access to higher education, this easier access does not always translate to successful transfer to a 4-year college. If one of the functions of community colleges is to serve as stepping stone to a 4-year degree, an important question to ask is: what factors influence successful transfer to a 4-year institution from a 2-year school? This article investigates the relative importance of social and academic background characteristics on the probability of transfer to a four-year college for a random sample of 2,500 students from the High School and Beyond (HS&B) Study who entered community college within two years of graduation from high school in 1980. Analytical methods used include both ordinary least squares and logistic regression and path analysis using LISREL.

Four years after graduation from high school, 24.3 percent of the HS&B students who began at 2-year colleges had transferred to a 4-year college. (Note: It should be clarified that the authors recognize that students may attend 2-year colleges for reasons other than eventual transfer to a 4-year institution; the primary purpose of this study is to identify the characteristics more strongly associated with transfer.) Factors describing the students' academic characteristics and performance in community college, such as number of semester-hours credit, full-time attendance, and number of semesters of math and science, were the strongest predictors of the eventual transfer in the path model. However, family background and high school factors, such a high socioeconomic status, being in the academic track in high school, and high school grade point average, exerted important indirect effects. In terms of personal characteristics, being from a higher socioeconomic status, in comparison to those from low-SES backgrounds, predicted eventual transfer to a 4-year institution among the students in the sample. However, the effect of gender was minimal (although negative for females), and race/ethnicity bore no relationship with transferring.

Since high-SES students were found to be more likely to transfer than students from a low-SES status (and since gender and race/ethnicity exhibited little-to-no relationship with transfer), the authors concluded that it is social class–and not gender or racial disadvantage–that impedes community college students from transferring. Moreover, the path model predicting transfer to a 4-year college

reveals a chain of events that leads back to the individual's social background: initial personal and family characteristics (such as SES and parental interest in the student's academics) influence higher educational aspirations and the choice to enroll in the high school academic track, which in turn, impacts decisions to enroll in academic courses in the community college, which positively affects eventual transfer to a 4-year school. Thus, although broader access to community colleges may appear to increase educational opportunities for socially and academically disadvantaged students, the fact that more advanced students with better academic preparation in high school actually transfer to 4-year colleges suggests that the community college experience may perpetuate, rather than ameliorate, social stratification in higher education. Available from the Sociology of Education. (Adapted from authors' abstract and text.)

American Council on Education. (1993). Probing the Community College Transfer Function: Research on Curriculum, Degree Completion, and Academic Tasks. Washington, DC: National Center for Academic Achievement and Transfer.

Between 1989 and 1992, the National Center for Academic Achievement and Transfer of the American Council on Education commissioned several research projects on transfer. The projects examined three dimensions of transfer: the role of curriculum, the role of the community college in baccalaureate degree acquisition, and the role of academic tasks that faculty ask students to complete.

The first study, "The total community college curriculum," is by Arthur M. Cohen and Jan M. Ignash. This 1991 study examined liberal arts and nonliberal arts course enrollments at community colleges and explored their relationship to transfer. Catalogs and class schedules of a random sample of 164 institutions affiliated with the American Association of Community Colleges were examined. Transfer rates for these institutions were determined by calculating the portion of the student population entering higher education for the first time, earning at least 12 credits at a community colleges, and within four years, enrolling at a 4-year institution. Results show that liberal arts study expanded from 52 percent of the curriculum in 1986 to 56 percent in 1991, with the fastest growing subject area being foreign languages–an expansion fueled almost exclusively by English-as-a-Second Language (ESL) courses. Community colleges in urban areas offer a higher percentage of remedial courses, but colleges with a high percentage of minorities have a high percentage of liberal arts enrollments, contrary to popular contentions that minorities are tracked into vocational programs. However, community colleges with high percentages of minority students also have lower transfer rates, but this relationship was found to be unrelated to a curriculum function. Overall, the transfer rate of a community college is positively related to the percentage of liberal arts courses that it offers. The transferability of nonliberal arts courses were also examined, and the results find that two primary factors seem to determine whether these courses are transferable: the institutional type of the receiving institution (for example, comprehensive colleges are more likely to accept nonacademic credits than research universities) and whether the institution offers coursework and programs similar to those offered by the community colleges.

The second study by James C. Palmer and Marilyn B. Pugh is entitled "The community college contribution to the education of bachelor's degree graduates: A Case Study in Virginia." The authors sought to understand the role of the community college in relation to baccalaureate degree acquisition. They analyzed transcripts for a random sample of 1,731 students who received a baccalaureate degree from any of six of Virginia's public universities during the academic year 1989-90. Results reveal that 39 percent of the college graduates had earned at least one credit at a community college, with the number of 2-year credits earned ranging from one to 155 with a median of 24. Only 15 percent of the students earned an associate's degree along the way, while 48 percent of the students began their higher education at a community college. Surprisingly, 52 percent of the students attended a

community college *after* beginning their postsecondary experience elsewhere. In general, the authors concluded that the community college functioned primarily as a resource for arts and sciences coursework. Community college education served as a supplement for many students, though it did provide "more formidable" portions of the undergraduate experience for some. Most frequently, the community college is used as an "occasional" institution, at which students earn considerably less than the equivalent of two years of full-time work, are not engaged in sequential learning experiences, and are highly independent in their decision making about which community college courses they pursue.

The final study by Janet H. Lawrence and Kathleen Hart is entitled, "Classroom contexts and academic tasks: A comparison of equivalent courses in community colleges and their primary receiving baccalaureate institutions." This research project focused on identifying similarities and differences in faculty expectations for students and the way these faculty teach. The authors examined introductory courses in English, history, political science, calculus and chemistry at three sending community colleges and one primary receiving institution, and compared faculty members' expectations for their students and their methods of introducing the subject matter at both types of institutions. Analytical methods used include faculty interviews and course documents such as syllabi, tests, quizzes, and writing assignments. Based upon the information gathered, the authors developed profiles of each course organized around six characteristics: 1) topic covered; 2) course goals; 3) teaching methods; 4) grading practices; 5) faculty expectations for students; and 6) academic tasks assigned. With regard to calculus and chemistry, all six characteristics were similar between the community colleges and the university. Political science, however, varied greatly, both among the community colleges and in comparison to the university. In history courses, goals tended to be similar across institutions, while teaching and student evaluation methods differed. For English courses, the topics covered were similar, but the emphasis given to those topics varied. Course assignments also varied, with baccalaureate faculty expecting more writing and more extensive use of written materials (as opposed to the personal experiences of the students).

These three studies focus on the community college's responsibility for several aspects of its curriculum in relation to transfer: content, structure, and portability. With regard to curricular content, Cohen and Ignash's study indicates that liberal arts curriculums in community colleges have a strong relationship with transfer rates. In relation to curricular structure, Palmer and Pugh emphasize that community colleges are often used as alternatives or "occasional" institutions where students gain credit in liberal arts courses that transfer to 4-year colleges, but do their coursework in a disorganized and discontinuous manner. Perhaps 2-year colleges should reconsider their academic program offerings and tailor sequences of courses that lead to an associates degree, or should establish stronger linkages with credit transferability to ensure degree completion. Finally, Lawrence and Hart's work points to the need to relate academic task similarity (portability) to transfer success. Not only should community colleges be offering courses for 4-year college credit as a method of preparation for the next level of postsecondary study, but they should consider preparation in other realms as well, including expectations, assignments, and teaching methods. Available for sale by the Publications Department PCC, American Council on Education, one Dupont Circle, Washington, DC 20036 ($15 ea.) (Adapted from authors' text.)

VII. Miscellaneous

(College Choice Process)

Hossler, D., and Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. College and University, **62(3), 207-21.**

This article lays the theoretical groundwork for much of the empirical research conducted in recent years on college access and choice. The authors review several models of college choice as well as several empirical studies to arrive at a theoretical model of students' decision-making process regarding college choice. The model has three phases (predisposition, search, and choice) and is proposed to be interactive in that it takes into account the attributes of students and some of the organizational factors at both the pre-college and the college level.

In phase one, influential individual factors include student background characteristics, significant others, and specific educational activities that predispose a student toward college. The influential organizational factors that predispose students include high school characteristics (curricula, status, peer college-going norms, etc.). At this early phase, it is presumed that colleges have little direct impact on student college choice, although proximity to a college campus was cited as affecting college enrollment rates. The outcomes of the predispositions phase are three types of students: "whiches" who will consider several college options; "whethers" who may apply to 1-2 local colleges or may not attend at all, and "nots" who never really consider going to college.

Students begin phase two, or the search phase, with preliminary college values and potential matriculants begin seeking information about college. More interaction with colleges starts to occur as students engage in college search activities and colleges begin the search for new students. The outcome of this second phase is a choice set or group of institutions that a student has decided to seek more information about and apply to for a decision. Here is where the authors say that search activity and accurate information about college costs and financial aid may be key so that students do not needlessly limit their college options.

In the third phase, students evaluate their choice set (depending on which colleges offer admission) and colleges engage in courtship activities that may include particular forms of aid, personal contact, and other recruitment strategies. The outcome of the choice phase is a selection decision to attend a particular college. It is pointed out, however, that this phase may be too late for institutional influence since most students have already eliminated many college options. The authors stress that the model is useful in understanding the important times to reach students in their thinking regarding postsecondary attendance. The most critical phase is the search phase, because the best way an institution can expand their applicant pool is through influencing and providing information about their college to students in the search phase. Available from College and University. (Adapted from authors' text.)

(College choice and persistence)

St. John, E. P., Paulsen, M. B., and Starkey, J. B. (1996). The nexus between college choice and persistence. Research in Higher Education, 37(2), 175-220.

While acknowledging that research on college choice and research on persistence have proceeded as separate branches of inquiry on students, the authors suggest that there are several perspectives which permit the convergence of this work both theoretically and empirically using national data sets. The authors theoretically link college choice and persistence through an elaboration of human capital theory, status attainment, and price-response research. That is, these frames suggest that students make specific choices about colleges and their decision to stay at a chosen college based on economics and perceived benefits in relation to costs. Thus, this is a study of the "nexus between student choice and persistence focusing on areas of financial impact using a market-based model" (p. 176). Initial student commitments have long been considered an influence on persistence, but the reasons why students choose to attend a college have seldom been considered as dimensions of initial commitments that could influence persistence processes and outcomes. In addition to this conceptual link, the authors identify several factors of the college choice literature that were hypothesized to also impact the college experience and subsequent decisions to remain in college. This included choosing a college because of its fixed costs (financial aid, low tuition, tuition and aid) and controllable costs, defined as choosing a college because of its proximity to place of residence, place of work, or place of living and work. These were used in a model of within-year persistence (defined as reenrollment in Spring semester after Fall enrollment) that included student background characteristics (race/ethnicity, gender, mother's education, age, high school degree, employment, dependency, income); college experience measures (residence, type of institution, year in college, college grades, degree aspirations as goal commitment, fixed costs during college (grants, loans, work, tuition, and housing), and controllable costs during college (food/travel).

Using data from the National Postsecondary Student Aid Study of 1987(NPSAS-87), this study examined the influence of finance-related reasons for college choice on persistence decisions. The study used a subsample of NPSAS-87 that included all full-time students enrolled in 4-year colleges and universities (n=18,836). Logistic regression was used estimate the effects of various factors in the model using seven equations that allowed the researchers to explore how coefficients changed as specific measures were entered in the equation, thereby providing more information about interactions among measures than is possible from viewing only the final step of the complete model.

The findings show that finance-related choices have direct and indirect influences on whether students persist in college. Students who chose a college because of low-tuition are less likely to persist than students who were not influenced by tuition costs. Choosing a college because of its proximity to work was positively related to persistence until the effects of tuition and student aid were controlled, indicating that the perceived advantage of this choice factor is diminished or offset by college costs and aid to meet these costs. The amount of money derived from work to pay for college, tuition costs, housing costs, and other living costs have significant direct negative effects on within-year persistence. These findings debunk the myth that finances are just an excuse for dropping out for other academic or social reasons. Instead, the authors conclude that there are interactions between finances and college experiences (both social and academic) that are part of the "mental calculation" students make about the costs and benefits of a particular college.

The well-conceived literature review and its concluding discussion on both college choice and persistence provides the basis for future work, including theory reconstruction and new avenues for research on the impact of choices and predispositions on subsequent decisions to continue enrollment.

This work informs institutional enrollment management considerations (where both choice and persistence are essential elements), state policy strategies for increasing enrollment, and suggests the need for institutions to be consistent about the "implicit contract" of financial support made when students first enroll in college. The latter is important because, as the study demonstrates, students may reevaluate their college choice decisions at subsequent points in time. Available from Research in Higher Education. (Adapted from authors' abstract and text.)

(Open admissions)

Lavin, D. E., and Crook, D. B. (1990). Open admissions and its outcomes: Ethnic differences in long-term educational attainment. American Journal of Education, 98(4), 389-425.

This article assesses patterns of postsecondary access and attainment for different racial/ethnic groups in the City University of New York (CUNY) system, and compares the outcomes of students who attended a CUNY school through its open admissions policy to those students who were admitted under regular policies. In 1970, CUNY, the largest urban university in the U.S. with 17 campuses (9 baccalaureate institutions and 8 community colleges), initiated a policy of open admissions that aimed to promote educational opportunity by providing access to college for large numbers of economically and educationally disadvantaged minority students. Longitudinal data gathered via official CUNY records and social surveys on a sample of approximately 5,000 students over the period 1970-1984 are used to investigate the educational and socioeconomic consequences of the open admissions program. While the open admissions program added more African-American and Hispanic students to the postsecondary pipeline, most were aggregated in the 2-year institutions, took a longer time-to-degree, or even dropped or "stopped" out. The authors term this effect as a "process of cumulative disadvantage," whereby weak high school preparation, entry into postsecondary education at the community college level, and full-time work reduced the likelihood of B.A. attainment and increased time-to-degree. Policy implications from the CUNY example include the following: 1) colleges, especially those wishing to reach out to minority youth, need to influence students' curricular choices *before* they apply to and enroll in college and cut off the cumulative disadvantage in its earlier stages; 2) systems with built-in transfer possibilities from 2-year to 4-year institutions should better prepare 2-year students for 4-year college work; and 3) since the largest percentage of minority students drop out of the pipeline somewhere between community college and 4-year transfer, higher education should not only strive to improve college preparedness at the high schools but also enroll more ethnic minorities in 4-year colleges in order to avoid the longer time-to-degree. Available from the American Journal of Education. (Adapted from authors abstract.)

Section III: Selected Bibliography
(in topic and dataset order)

I. Financial Aspects of Access

A. Financial Aid (and tuition-financial aid linkage)

Using HS&B

St. John, E. P., and Noell, J. (1989). The effects of student financial aid on access to higher education: An analysis of progress with special consideration of minority enrollment. Research in Higher Education, 30(6), 563-81. *Empirical: HS&B*

Jackson, G. A. (1990). Financial aid, college entry, and affirmative action. American Journal of Education, 98(4), 523-50. *Empirical: HS&B*

Using NLS-72

Jackson, G. A. (1978). Financial aid and student enrollment. Journal of Higher Education, 49(6), 548-74. *Empirical: NLS-72*

Kane, J., and Spizman, L. M. (1994). Race, financial aid awards and college attendance: Parents and geography matter. American Journal of Economics and Sociology, 53(1), 85-97. *Empirical: NLS-72, see also Personal, Race (Annotated)*

Using other federal data

Heller, D. E. (1997). Access to Public Higher Education, 1976 to 1994: New Evidence from an Analysis of the States. Unpublished doctoral dissertation, Harvard University, School of Education, Cambridge, MA. *Empirical: Various federal sources (Annotated)*

Andrew, L. D., and Russo, R. (1989). Who Gets What? Impact of Financial Aid Policies. Research in Higher Education, 30, 471-83. *Empirical: College Board and IPEDS*

Using local data

Seneca, J. J., and Taussig, M. K. (1987). The effects of tuition and financial aid on the enrollment decision at a state university. Research in Higher Education, 26(4), 337-62. *Empirical: Local–Rutgers, New Jersey*

Zollinger, R. A. (1984). Financial aid and equity of college choice: The Illinois experience. Journal of Education Finance, 10(1), 121-31. *Empirical: Local–Illinois sample*

Reviews/summaries

Hearn, J. C., and Longanecker, D. (1985). Enrollment effects of alternative postsecondary pricing. Journal of Higher Education, 56(5), 485-508. *Review*

B. Price Response

Using HS&B

St. John, E. P. (1990). Price response in enrollment decisions: An analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 31(2), 161-76. *Empirical: HS&B (Annotated)*

St. John, E. P. (1991). What really influences minority attendance? Sequential analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 32(2), 141-58. *Empirical: HS&B, see also Personal, Race; Preparation (Annotated)*

Using IPEDS

St. John, E. P. (1994). Assessing tuition and student aid strategies: Using price-response measures to simulate pricing alternatives. Research in Higher Education, 35(3), 301-34. *Empirical: Simulation using IPEDS data*

St. John, E. P. (1993). Untangling the web: Using price-response measures in enrollment projection. Journal of Higher Education, 64(6), 676-95. *Empirical: IPEDS trend data*

Reviews/summaries

Leslie, L. L., and Brinkman, P. T. (1987). Student price response in higher education: The student demand studies. Journal of Higher Education, 58(2), 181-204. *Review*

C. Parental Responsibility

Using HS&B and NELS

Steelman, L. C., and Powell, B. (1993). Doing the right thing: Race and parental locus of responsibility for funding college. Sociology of Education, 66(4), 223-44. *Empirical: HS&B and NELS, see also Personal, Involvement; Cultural characteristics (Annotated)*

Using local data

Hossler, D., Schmit, J., and Bouse, G. (1991). Family knowledge of postsecondary costs and financial aid. Journal of Student Financial Aid, 21(1), 4-17. *Empirical: Local–Indiana Survey, see also Personal, Involvement*

Hossler, D., and Vesper, N. (1993). An exploratory study of the factors associated with parental saving for postsecondary education. Journal of Higher Education, 64(2), 140-65. *Empirical: Local–Indiana Survey, see also Personal, Involvement*

D. Other Links With Financing Postsecondary Education

Using HS&B

Baum, S., and Schwartz, S. (1986). Equity, envy, and higher education. Social Science Quarterly, 67(3), 491-503. Empirical: HS&B

Ordovensky, J. F. (1995). Effects of institutional attributes on enrollment choice: Implications for postsecondary vocational education. Economics of Education Review, 14(4), 335-50. Empirical: HS&B (Annotated)

Using NLS-72

Fuller, W. C., Manski, C. F., and Wise, D. A. (1982). New evidence on the economic determinants of postsecondary schooling choices. Journal of Human Resources, 17(4), 477-95. *Empirical: NLS-72*

Using NLS-72 and CIRP

Leslie, L. L. (1984). Changing patterns in student financing of higher education. Journal of Higher Education, 55(3), 313-46. *Empirical: NLS-72 and CIRP*

Reviews/summaries

Hossler, D. (1984). Enrollment Management: An Integrated Approach. New York: The College Board. *Review*

Orfield, G. (1992). Money, equity, and college access. Harvard Educational Review, 62(3), 337-72. *Review/essay*

II. Personal Aspects of Access

A. Goals Attainment (aspirations, plans, enrollment, attendance)

1. General

Using HS&B

Hearn, J. C. (1991). Academic and nonacademic influences on the college destinations of 1980 high school graduates. Sociology of Education, 64, 158-71. *Empirical: HS&B*

Hearn, J. C. (1988). Attendance at higher-cost colleges: Ascribed, socioeconomic and academic influences on student enrollment patterns. Economics of Education Review, 7, 65-76. *Empirical: HS&B*

Hearn, J. C. (1988). Determinants of postsecondary education attendance: some implications of alternative specifications of enrollment. Educational Evaluation and Policy Analysis, 10(2), 172-85. *Empirical: HS&B*

Using HS&B and NLS-72

Gardner, J. A. (1987). Transition from High School to Postsecondary Education: Analytical Studies. Contractor Report. Washington, DC: Superintendent of Documents, U.S. Government Printing Office. *Empirical: HS&B and NELS (Annotated)*

Using PSAT survey

Hearn, J. C. (1984). The relative roles of academic, ascribed, and socioeconomic characteristics in college destinations. Sociology of Education, 57, 22-30. *Empirical: PSAT Survey*

Using local data

Hossler, D., and Maple, S. (1993). Being undecided about postsecondary education. Review of Higher Education, 16(3), 285-307. *Empirical: Local–Indiana survey*

2. Gender

Using HS&B

Cardoza, D. (1991). College attendance and persistence among Hispanic women: An examination of some contributing factors. Sex Roles, 24(3-4), 133-47. *Empirical: HS&B, see also Personal, Race*

Using CIRP

Astin, H. S. (1990). Educating women: A promise and a vision for the future. American Journal of Education, 98(4), 479-93. *Empirical: CIRP and interviews*

Using PSAT Survey

Rosenfeld, R. A., and Hearn, J. C. (1982). Sex differences in college choice and financing higher education. In P. Perun (Ed.), The Undergraduate Woman (pp. 127-57). Lexington, MA: Lexington Books. *Empirical: PSAT Survey*

Using local data

Stage, F. K., and Hossler, D. (1989). Differences in family influences on college attendance plans for male and female ninth graders. Research in Higher Education, 30(3), 301-15. *Empirical: Local–Indiana survey, see also Personal, Involvement; Cultural characteristics*

Reviews/summaries

Jacobs, J. A. (1996). Gender inequality and higher education. Annual Review of Sociology, 22, 153-85. *Review*

Karen, D. (1991). Politics of class, race and gender: Access to higher education in the United States, 1960-1986. American Journal of Education, 99, 208-37. *Review, see also Personal, Race; Personal, Socioeconomic status*

3. Race/Ethnicity

Using HS&B

Cardoza, D. (1991). College attendance and persistence among Hispanic women: An examination of some contributing factors. Sex Roles, 24(3-4), 133-47. *Empirical: HS&B, see also Personal, Gender*

Kane, T. J. (1994). Race, College Attendance and College Completion. Washington, DC: Office of Educational Research and Improvement. *Empirical: HS&B, see also Miscellaneous, relationship between college choice and persistence*

St. John, E. P. (1991). What really influences minority attendance? Sequential analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 32(2), 141-58. *Empirical: HS&B, see also Financial aspects, Price-response; Preparation (Annotated)*

Using NLS-72

Kane, J., and Spizman, L. M. (1994). Race, financial aid awards and college attendance: Parents and geography matter. American Journal of Economics and Sociology, 53(1), 85-97. *Empirical: NLS-72, see also Finance, Financial Aid (Annotated)*

Using BPS and NELS

Hurtado, S., Kurotsuchi Inkelas, K., Briggs, C., and Rhee, B.-S. (1997). Differences in college access and choice among racial/ethnic groups: Identifying continuing barriers. Research in Higher Education, 38 (1), 43-75. *Empirical: BPS and NELS (Annotated)*

Using other national/federal data

Hauser, R. M., and Anderson, D. K. (1991). Post-high school plans and aspirations of Black and White high school seniors: 1976-86. Sociology of Education, 64(4), 263-77. *Empirical: Monitoring the Future Data Base, Institute for Social Research, University of Michigan (Annotated).*

Paul, F. G. (1990). Access to college in a public policy environment supporting both opportunity and selectivity. American Journal of Education, 98(4), 351-88. *Empirical: HEGIS/IPEDS, State Board of Education data on high school graduates, see also Preparation; Geographic Location (Annotated)*

Hauser, R. M. (1992). The decline in college entry among African-Americans: Findings in search of an explanation. In P. Sniderman, P. Tetlock, and E. Carmines (Eds.), Prejudice, Politics, and Race in America Today (pp. 271-306). Stanford, CA: Stanford University Press. *Empirical*

Using case studies in 8 cities

Richardson, R. C., Jr., and Bender, L. W. (1987). Fostering Minority Access and Achievement in Higher Education: The Role of Urban Community Colleges and Universities. San Francisco, CA: Jossey-Bass, Inc. *Empirical: Case studies, see also Geographic Location*

Reviews/summaries

Karen, D. (1991). Politics of class, race and gender: Access to higher education in the United States, 1960-1986. American Journal of Education, 99, 208-37. *Review, see also Personal, Gender; Personal, Socioeconomic status*

Wilson, R. (1990). Can Black colleges solve the problem of access for Black students? American Journal of Education, 98(4), 443-57. *Review/essay*

4. Socioeconomic Status

Using HS&B

Camburn, E. M. (1990). College completion among students from high school located in large metropolitan areas. American Journal of Education, 98(4), 551-69. *Empirical: HS&B, see also Geographic Location; Miscellaneous, Relationships*

Reviews/summaries

Karen, D. (1991). Politics of class, race and gender: Access to higher education in the United States, 1960-1986. American Journal of Education, 99, 208-37. *Review, see also Personal, Gender; Personal, Race*

5. Nontraditional Age

Using HS&B

Hearn, J. C. (1992). Emerging variations in postsecondary attendance patterns: An investigation of part-time, delayed, and nondegree enrollment. Research in Higher Education, 33(6), 657-87. *Empirical: HS&B (Annotated)*

Using BPS

Hurtado, S., Kurotsuchi, K., and Sharp, S. (1996). College entry by age groups: Paths of traditional, delayed-entry, and nontraditional students. Paper presented at the Annual Meeting of the American Educational Research Association . *Empirical: BPS*

Using qualitative data

Bers, T. H., and Smith, K. (1987). College choice and the nontraditional student. Community College Review, 15(1), 39-45. Empirical: qualitative

B. Performance (academic achievement)

Owings, J., McMillen, M., and Burkett, J. (1995). Making the Cut: Who Meets Highly Selective College Entrance Criteria? Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. *Empirical: NELS, see also Preparation (Annotated)*

Note: Most articles use academic achievement/performance measures as control variables.

C. Involvement of Significant Others (parent, teacher, school encouragement)

Using HS&B

Smith, M. H., Beaulieu, L. J., and Seraphine, A. (1995). Social capital, place of residence, and college attendance. Rural Sociology, 60(3), 363-80. *Empirical: HS&B, see also Geographic Location; Cultural characteristics*

Stage, F. K., and Hossler, D. (1989). Differences in family influences on college attendance plans for male and female ninth graders. Research in Higher Education, 30(3), 301-15. *Empirical: HS&B, see also Personal, Gender; Cultural characteristics*

Wilson, P. M., and Wilson, J. R. (1992). Environmental influences on adolescent educational aspirations: A logistic transform model. Youth and Society, 24(1), 52-70. *Empirical: HS&B, see also Cultural characteristics*

Using HS&B and NELS

Steelman, L. C., and Powell, B. (1993). Doing the right thing: Race and parental locus of responsibility for funding college. Sociology of Education, 66(4), 223-44. *Empirical: HS&B and NELS, see also Financial aspects, Parental responsibilities; Cultural characteristics (Annotated)*

Using local data

Conklin, M. E., and Dailey A. R. (1981). Does consistency of parental educational encouragement matter for secondary school students? Sociology of Education, 54, 254-62. *Empirical: Local–south New York, see also Cultural characteristics*

Hossler, D., Schmit, J., and Bouse, G. (1991). Family knowledge of postsecondary costs and financial aid. Journal of Student Financial Aid, 21(1), 4-17. *Empirical: Local–Indiana Survey, see also Financial aspects, Parental responsibilities*

Hossler, D., and Vesper, N. (1993). An exploratory study of the factors associated with parental saving for postsecondary education. Journal of Higher Education, 64(2), 140-65. *Empirical: Local–Indiana Survey, see also Financial aspects, parental responsibilities*

III. Preparation for Postsecondary Study (eligibility)

Using HS&B

St. John, E. P. (1991). What really influences minority attendance? Sequential analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 32(2), 141-58. *Empirical: HS&B, see also Financial aspects, Price response; Personal, Race (Annotated)*

Using NELS

Owings, J., McMillen, M., and Burkett, J. (1995). Making the Cut: Who Meets Highly Selective College Entrance Criteria? Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. *Empirical: NELS, see also Personal, Performance (Annotated)*

Using other federal and state data

Paul, F. G. (1990). Access to college in a public policy environment supporting both opportunity and selectivity. American Journal of Education, 98(4), 351-88. *Empirical: HEGIS/IPEDS, State Board of Education data on high school graduates, see also Geographic Location; Personal, Race (Annotated)*

Using case studies in 8 cities

Richardson, R. C., Jr., and Bender, L. W. (1987). Fostering Minority Access and Achievement in Higher Education: The Role of Urban Community Colleges and Universities. San Francisco, CA: Jossey-Bass, Inc. *Empirical: Case studies, see also Personal, Race*

IV. Geographic Location Concerns (rural, urban, metropolitan area)

Using HS&B

Camburn, E. M. (1990). College completion among students from high school located in large metropolitan areas. American Journal of Education, 98(4), 551-69. *Empirical: HS&B, see also Personal , Race; Miscellaneous, Relationships*

Smith, M. H., Beaulieu, L. J., and Seraphine, A. (1995). Social capital, place of residence, and college attendance. Rural Sociology, 60(3), 363-80. *Empirical: HS&B, see also Personal, Involvement; Cultural Characteristics*

Using NELS

Hamrick, F. A., and Stage, F. K. (1995). Student predisposition to college in high minority enrollment, high school lunch participation schools. Paper presented at the Annual Meeting of the Association for the Study of Higher Education . *Empirical: NELS*

Using other federal and state data

Mortenson, T. G. (1994). Postsecondary Education Opportunity: The Mortenson Report on Public Policy Analysis of Opportunity for Postsecondary Education (No. 20 ed.). Iowa City, IA: Postsecondary Education Opportunity. *Empirical: Census Bureau*

Orfield, G., and Paul, F. (1988). Declines in minority access: A tale of five cities. Educational Record, 68(4), 56-62. *Empirical: HEGIS/IPEDS, State Board of Education data on high school graduates*

Paul, F. G. (1990). Access to college in a public policy environment supporting both opportunity and selectivity. American Journal of Education, 98(4), 351-88. *Empirical: HEGIS/IPEDS, State Board of Education data on high school graduates, see also Preparation; Personal, Race (Annotated)*

V. Cultural Characteristics of Students

Using HS&B

Persell, C. H., Catsambis, S., and Cookson, P. W. (1992). Differential asset conversion: Class and gender pathways to selective colleges. Sociology of Education, 65, 208-25. *Empirical: HS&B, see also Personal, Involvement*

Smith, M. H., Beaulieu, L. J., and Seraphine, A. (1995). Social capital, place of residence, and college attendance. Rural Sociology, 60(3), 363-80. *Empirical: HS&B, see also Geographic Location; Personal, Involvement*

Stage, F. K., and Hossler, D. (1989). Differences in family influences on college attendance plans for male and female ninth graders. Research in Higher Education, 30(3), 301-15. *Empirical: HS&B, see also Personal, Gender; Personal, Involvement*

Wilson, P. M., and Wilson, J. R. (1992). Environmental influences on adolescent educational aspirations: A logistic transform model. Youth and Society, 24(1), 52-70. *Empirical: HS&B, see also Personal, Involvement*

Using HS&B and NELS

Steelman, L. C., and Powell, B. (1993). Doing the right thing: Race and parental locus of responsibility for funding college. Sociology of Education, 66(4), 223-44. *Empirical: HS&B and NELS, see also Financial aspects, Parental responsibilities; Personal, Involvement (Annotated)*

Using CIRP

McDonough, P. M., and Antonio, A. L. (1996). Racial differences in college choice. Paper presented at the Annual Meeting of the American Educational Research Association. *Empirical: CIRP*

Using local data

Conklin, M. E., and Dailey A. R. (1981). Does consistency of parental educational encouragement matter for secondary school students? Sociology of Education, 54, 254-62. *Empirical: Local–south New York, see also Personal, Involvement*

Using qualitative data

McDonough, P. M. (1994). Buying and selling higher education: The social construction of the college applicant. Journal of Higher Education, 65(4), 427-46. *Empirical: qualitative (Annotated)*

VI. Transitions Between Levels and Types (transfer)

Using NLS-72

Adelman, C. (1992). The Way We Are: The American Community College as Thermometer. Washington, DC: Superintendent of Documents, U.S. Government Printing Office. *Empirical: NLS-72*

Adelman, C. (1988). Transfer rates and the going mythologies: A look at community college patterns. Change, 20(1), 38-41. *Empirical: NLS-72*

Velez, W., and Javalgi, R. G. (1987). Two-year college to four-year college: The likelihood of transfer. American Journal of Education, 96(1), 81-94. *Empirical: NLS-72*

Using NLS-72 and HS&B

Grubb, W. N. (1989). Access, Achievement, Completion, and "Milling Around" in Postsecondary Vocational Education. Berkeley, CA: MPR Associates. *Empirical: NLS-72 and HS&B (Annotated)*

Grubb, W. N. (1991). The decline of community college transfer rates: Evidence from national longitudinal surveys. Journal of Higher Education, 62(2), 194-222. *Empirical: NLS-72 and HS&B (Annotated)*

Using HS&B

Lee, V. E., and Frank, K. A. (1990). Student characteristics which facilitate transfer from 2-year to 4-year colleges. Sociology of Education, 63, 178-93. *Empirical: HS&B (Annotated)*

Using other federal or state data

Strengthening Transfer and Articulation Policies and Practices in California's Colleges and Universities. Progress since 1985 and Suggestions for the Future. Commission Report 87-41. (1987). Sacramento, CA: California State Postsecondary Education Commission.

Probing the Community College Transfer Function: Research on Curriculum, Degree Completion, and Academic Tasks. (1993). Washington, DC: American Council on Education. *Empirical: primarily quantitative (Annotated)*

Reviews/summaries

Cohen, A. M. (1990). The case for the community college. American Journal of Education, 98(4), 426-42. *Review*

Dougherty, K. (1987). The effects of community colleges: Aid or hindrance to socioeconomic attainment? Sociology of Education, 60(2), 86-103. *Review*

VII. Miscellaneous

A. College Choice

Using HS&B

Tuttle, R. (1981). A Path Analytical Model of the College Going Decision. Boone, NC: Appalachian State University. *Empirical: HS&B*

Using local sample

Schmit, J. L., and Hossler, D. (1995). Where are they now?: A nine year longitudinal study of student college choice. Paper presented at the Annual Meeting of the American Education Research Association. *Empirical: Indiana survey, plus interviews*

Reviews/summaries

Hossler, D., Braxton, J., and Coopersmith, G. (1995). Understanding student college choice. In F. K. Stage et al. (Eds.), ASHE Reader on College Students. Needham Heights, MA: Simon and Schuster. *Review*

Hossler, D., and Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. College and University, 62(3), 207-21. *Review/essay (Annotated)*

Litten, L. H. (1982). Different strokes in the applicant pool: Some refinements in a model of student college choice. Journal of Higher Education, 53(4), 383-402. *Review*

B. General Reviews

Baker, T. L., and Velez, W. (1996). Access to and opportunity in postsecondary education in the United States: A Review. Sociology of Education, 82-101. *Review*

Orfield, G. (1990). Public policy and college opportunity. American Journal of Education, 98(4), 317-50. *Reviews and summarizes rest of articles in special issue of AJE*

C. Historical Accounts

Thelin, J. R. (1985). Beyond background music: Historical research on admissions and access in higher education. In J. C. Smart (Ed.), Higher Education: Handbook of Theory and Research, Volume I. New York: Agathon Press, Inc. *Review*

D. Relationship Between College Choice and Persistence

Including models linking access with persistence

Stage, F. K., and Rushin, P. W. (1993). A combined model of student predisposition to college and persistence in college. Journal of College Student Development, 34, 276-81. *Empirical: HS&B*

St. John, E. P., Paulsen, M. B., and Starkey, J. B. (1996). The nexus between college choice and persistence. Research in Higher Education, 37(2), 175-220. *Empirical: NPSAS-87 (Annotated)*

Examples of literature assuming a link between access and persistence

Camburn, E. M. (1990). College completion among students from high school located in large metropolitan areas. American Journal of Education, 98(4), 551-69. *Empirical: HS&B, see also Personal, Race; Geographic Location*

Kane, T. J. (1994). Race, College Attendance and College Completion. Washington, DC: Office of Educational Research and Improvement. *Empirical: HS&B, see also Personal, Race*

E. College Admissions

Using local data

Lavin, D. E., and Crook, D. B. (1990). Open admissions and its outcomes: Ethnic differences in long-term educational attainment. American Journal of Education, 98(4), 389-425. *Empirical: Local–New York CUNY Survey (Annotated)*

Reviews/summaries

Sparks, L. (1993). College Admissions: A Selected, Annotated Bibliography. Bibliographies and Indexes in Education, No. 11. Westport, CT: Greenwood Publishing Group. *Review*

Section IV: Bibliographic List of Sources

Adelman, C. (1988). Transfer rates and the going mythologies: A look at community college patterns. Change, 20(1), 38-41.

ERIC Abstract:

Data from the National Longitudinal Study of the High School Graduating Class of 1972 and the Postsecondary Education Transcript Study are analyzed to confirm or challenge common assumptions about community college students' attendance, transfer, and graduation patterns. Cited from: MSE, ERIC Document #EJ366292.

Adelman, C. (1992). The way we are: The community college as American thermometer. U.S. Department of Education, U.S. Government Printing Office: Washington, DC.

Alexander, K. L., Pallas, A. M., and Holupka, S. (1987). Consistency and change in educational stratification: Recent trends regarding social background and college access. In R. V. Robinson (Ed.), Research in Social Stratification and Mobility (Vol. 6, pp. 161-85). Greenwich, CT: JAI Press.

Andrew, L. D., and Russo, R. (1989). Who gets what? Impact of financial aid policies. Research in Higher Education, 30, 471-83.

Article Abstract:

Because of the radical reorientation of financial aid policies in the eighties, loan indebtedness and the amount of federal subsidy of loans have increased dramatically. Paralleling these developments has been the growth of the proprietary sector of postsecondary education and the use of federal-supported financial aid by this sector's students. This article examines the impact of current financial aid policies on different sectors. Evidence appears clear that new policy is required to serve equity and human and social capital development. The success of the proprietary sector in growing its market share at the expense of other sectors–in particular, community colleges–provides some useful lessons about aggressive recruiting.

ERIC Abstract:

Since 1980 the legislation and administration of federal financial aid to students has changed radically. Four topics examined in this study are: what changes have been made; their effects on federal funding allocations and obligations; how the changes may have contributed to the growth of the proprietary sector of education at the expense of community colleges; and how the changes have contributed to the decline of African-American and Hispanic pursuit of higher education. The study draws from literature, in particular from data compiled by the U.S. Department of Education, the College Board, legislation that affected financial aid, and preliminary analyses of the recently completed U.S. Department of Education National Postsecondary Student Aid Survey. The 1978, 1982, and 1986 amendments to the Higher Education Act and concomitant rises in the costs of higher education have had several effects on student choices of higher education sectors and institutions. Higher costs have reduced the options of low and middle income students to choose among schools; increased student dependence on borrowing large sums to finance higher education; and forced students and families to turn to other sources for support in many cases. The participation of African-Americans and Hispanics in higher education has declined, and a large proportion of those who pursue a higher education choose community colleges and proprietary schools. Five tables and included. Contains 11 references. Cited from: SM, ERIC Document #ED309717.

Astin, A. W. (1990). Educational assessment and educational equity. American Journal of Education, 98(4), 458-78.
Article Abstract:
Educational testing and assessment pose a serious obstacle to the educational progress of underrepresented groups, primarily because of the manner in which these tools are used. If assessment were to be used primarily as a form of feedback for enhancing the learning process rather than for screening and selecting, the cause of educational equity would be much better served. To accomplish such a change in our use of assessment will require a major revision in our traditional notions about educational "excellence."

Astin, H. S. (1990). Educating women: A promise and a vision for the future. American Journal of Education, 98(4), 479-93.
Article Abstract:
This article, based on two data sources, a national survey of college students, and a sample of students at UCLA, examines the educational and career aspirations of women entering college. The study also identifies trends over time. The findings highlight the dramatic increases in women's participation in higher education and the changes in their educational and career aspirations. The article also addresses the diversity within the student body and draws implications for higher education. It calls for institutions to become more responsive to women's educational needs as reflected in their diverse backgrounds and cultures.

Baker, T. L., and Velez, W. (1996). Access to and opportunity in postsecondary education in the United States: A Review. Sociology of Education, 82-101.
Article Abstract:
This review of the research on access to and persistence in higher education found that the proportions of women, older, and part-time college students have increased dramatically since 1960 and that although enrollments of African-Americans and Latinos have also increased, they slowed in the 1980s, perhaps because of changed financial aid policies. Predictive research on access and persistence indicates the generally declining importance of socioeconomic advantage, as compared to academic ability. Weaker social and academic integration of students within their institutions has been used to explain lower rates of college persistence. Conversely, research shows the generally positive effects of women's and historically African-American colleges. Beginning at a community college lessens a student's chances of attaining a baccalaureate degree. Most forms of financial aid strengthen the persistence of minority students, though loans may not.

ERIC Abstract:
Reviews the research on access to and persistence within higher education among women, minorities, older, and part-time students. Discovers that, although participation among these groups has risen dramatically since 1960, enrollment among African-Americans and Latinos dropped during the 1980s. Discusses causes and implications of these developments. Cited from: MJP, ERIC Document #EJ534904.

Baum, S., and Schwartz, S. (1986). Equity, envy, and higher education. Social Science Quarterly, 67(3), 491-503.
Article Abstract:
Using the economic theory of "fairness" as the absence of envy, this study develops an empirical measure of envy in access to higher education. The results suggest that, given the existence of current government subsidies, financial barriers do not prevent a significant number of high school graduates from attending college. Low measured academic ability is the strongest predictor both of

low educational aspirations and of failure to fulfill expressed aspirations. These results must be interpreted cautiously because of measurement difficulties.

ERIC Abstract:
Develops and tests an empirical measure of fairness and envy over access to higher education for 12,000 high school students. Results suggest that, given the existence of current government subsidies, financial barriers do not prevent a significant number of high school graduates from attending college. Cited from: Author/TRS, ERIC Document #EJ341944.

Bers, T. H., and Smith, K. (1987). College choice and the nontraditional student. Community College Review, 15(1), 39-45.

Braun, T. G. (1983). An analysis of the effects of geographic-demographic factors on college attendance. Research in Higher Education, 19(2), 131-52.
PsychInfo Abstract:
Factor and cluster analyses were used to establish 4 groupings of 120 Kentucky counties. American College Testing Interest Inventory results, demographic data, and 1977-1980 enrollment data for 11,649 1977 high school graduates enrolled in state-supported colleges and universities during the 1977 fall semester were analyzed. Four hypotheses tested enrollment, persistence, and transfer activities; college-going rates; and Ss' academic achievements. Results reveal significant differences between counties and do not support the hypotheses. (35 ref).

Cagampang, F. H. H. (1992). What Parents Know About Preparing for College and How it Affects their Children's Academic Performance: Parents' Information in the College Choice Decision. Unpublished doctoral dissertation, University of California, Berkeley.

California State Postsecondary Education Commission. (1987). Strengthening Transfer and Articulation Policies and Practices in California's Colleges and Universities. Progress since 1985 and Suggestions for the Future. Commission Report 87-41. Sacramento, CA: Author.
Notes from microfiche:
This document presents 11 recommendations for improving transfer from California's Community colleges to its four-year colleges and universities. Part 1 of this report describes CPEC's origins and purposes. Part 2 describes the context for strengthening the transfer function. Part 3 includes segmental and Commission staff comments on implementation of the Commission's 1985 recommendations. Part 4 summarizes implications of the Commission's Ford Foundation study for improving transfer and articulation. Part 5 offers the Commission's recommendations that replace those of 1985.

ERIC Abstract:
This report reviews and analyzes progress made by the California Community Colleges (CCCs), University of California (UC), and California State University (CSU) in improving transfer and articulation. After part 1 discusses the origins and purposes of the report, part 2 highlights events affecting transfer and articulation in California since 1983, focusing on changes in undergraduate enrollments, more comprehensive admissions requirements, financial problems, state-level commitment to affirmative action and transfer, and specially-funded projects. Part 3 offers information from the CCCs, UC, CSU, and the California Postsecondary Education Commission (CPEC) regarding progress made since 1985 toward improving high school preparation; identifying, assessing, and counseling transfer students; assuring adequate community college transfer courses; gathering comparable information on community college enrollments and student

achievement; improving information about transfer; and coordinating enrollment planning. Part 4 summarizes the findings of a 1987 CPEC study of transfer and articulation between two- and four-year colleges nationwide with respect to state and faculty roles, statewide versus local articulation, special funding, freshman admission standards, assessment and remediation, minority access, career-oriented articulation, and database and information systems. Part 5 contains CPEC recommendations for additional action to facilitate the flow of transfer students. Appendixes provide transfer data, relevant legislation, and descriptions of selected articulation projects: (1) Transfer Center Project; (2) Project Assist (Articulation System Stimulating Interinstitutional Student Transfer); and (3) Transfer Alliance Program (TAP). Cited from: MCB, ERIC Document #ED293602.

Camburn, E. M. (1990). College completion among students from high school located in large metropolitan areas. American Journal of Education, 98(4), 551-69.

Article Abstract:

The study uses High School and Beyond third follow-up data to analyze college completion rates for graduates of high schools located in the country's largest metropolitan areas. First, it examines the effects of race and socioeconomic status (SES) on degree attainment prospects. Next, three high school characteristics–high school type (public or private), high school location within the metropolitan area (city or suburb), and high school racial composition–and two academic measures (high school grades and scores on a standardized test) are introduced in order to see whether these measures account for race and SES differences. Finally, three stages of completing college–application, entry for those who apply, and graduation for those who enter–are analyzed separately in an attempt to pinpoint when the determinants of degree completion have their impact. The findings indicate that differences attributable to SES and high school racial composition persist, with low-SES individuals and those from high schools with lower percentages of Whites experiencing lower graduation rates, even when students' postsecondary educational plans, academic ability, and college entry are controlled. Most students who desire to obtain a college degree are at least able to apply to college and attend some classes. However, once in college, persisting to graduation proves more problematic.

Cardoza, D. (1991). College attendance and persistence among Hispanic women: An examination of some contributing factors. Sex Roles, 24(3-4), 133-47.

Article Abstract:

The relationship of various factors associated with college attendance and persistence for Hispanic women were investigated using the High School and Beyond data base. Socioeconomic background, educational aspirations, culture and language background, availability of financial aid, "cultural shock," sex role socialization variables, and college preparation courses have all been identified in the literature as important factors influencing the college going and attendance patterns of Hispanic women. Using the 1982 First Follow-up data from the High School and Beyond Survey, the relative importance of these measures on college-going behavior was analyzed. Educational aspirations were found to be the most important predictor of college attendance and persistence. Sex role socialization was also found to be an important factor in explaining the college behavior patterns of Hispanic women. Women who delayed marriage and having a family were found to pursue a college career more often and tended to persist in college longer than those women who followed traditional sex role patterns. In addition, Hispanic women whose mother had a college education were more likely to attend college themselves. Interestingly, participation in college preparation courses was found to rank much lower in importance than previously mentioned factors.

PsychInfo Abstract:
Investigated factors associated with college attendance and persistence in 1,252 female Hispanic 10th-12th graders who participated in the 1980 High School and Beyond Survey. The relative importance of socioeconomic background, educational aspirations, culture and language background, availability of financial aid, cultural shock, sex role socialization variables, and college preparation courses on college-going behavior was analyzed. Educational aspirations were found to be the most important predictor of college attendance and persistence. Ss who delayed marriage and having a family pursued a college career more often and persisted in college longer than Ss who followed traditional sex role patterns. Ss whose mothers had a college education were more likely to attend college themselves. Participation in college preparation courses ranked low in importance.

The Carnegie Foundation for the Advancement of Teaching. (1986). The Price of College Shaping Students' Choices: Change Trendlines. (1986). Princeton, NJ: Author.

Carrigg, D. (1990). Educating urban Indians. Tribal College Journal of American Indian Higher Education, 2(2), 16-18.
ERIC Abstract:
Describes difficulties in locating and recruiting Indian students living off reservations and lack of information about financial aid among urban Indians. Discusses problems related to proving eligibility for financial assistance. Reviews efforts to improve educational access for urban Indians. Cited from: DMM, ERIC Document #EJ444485.

Chaikind, S. (1987). College Enrollment Patterns of Black and White Students. Washington, DC: Decision Resources Corp.
Notes from microfiche:
This report examines recent trends in the enrollment of African-American and White high school graduates in college. Data from the Census Bureau's Current Population Survey, the Higher Education General Information Survey (HEGIS), and from High School and Beyond (HS&B) are examined for patterns in African-American enrollment in college since 1970. The key findings are as follows: 1) The number and proportion of African-American 18- to 24-year-olds who attended college increased substantially between 1970 and 1985. The percentage of African-American 18- to 24-year-olds attending college increased (from 15.5 percent in 1970 to 22.6 percent in 1976), declined slightly between 1976 and 1980 (from 22.6 to 19.2 percent in 1980), and increased slightly or remained stable since 1980 (reaching 19.8 percent in 1985). 2) The portion of African-American 25- to 29-year-olds completing four years of college increased in the early 1970's, declined between 1976 and 1980 and increased to a record high 14.6 percent in 1984. 3) Among all African-American individuals in the traditional and nontraditional age groups taken together, there has been a slight decline in the number enrolled since 1980, although enrollment in 1984 is higher than it was in 1976. According to HEGIS data, 1,033,000 African-Americans were enrolled in 1976, 1,107,000 in 1980, and 1,070,000 in 1984. 4) Within the same academic groups, African-American high school graduates attend college in proportions equal to or greater than the proportions of Whites who attend, according to HS&B data. For both African-Americans and Whites, the proportion entering college increases with rising achievement levels. 5) Within the same income groups, African-American high school graduates attend college in proportions equal to or greater than the proportions of Whites who attend, according to HS&B data. For both African-Americans and Whites, the proportion entering college increases as family income increases. 6) Based on data from the National Assessment of Educational Progress (NAEP), substantially fewer African-American than White 11th graders read at the level expected of college

freshmen. Nationwide, 19 percent of African-American 11th graders read at the "adept" level compared with 47 percent of Whites. 7) The gap in African-American and White achievement found in NAEP data, in conjunction with HS&B data showing similar African-American and White enrollment by achievement level, suggest that African-Americans' enrollment in college would increase dramatically if African-Americans' academic achievement in elementary and secondary grades increased to a level comparable with the achievement of Whites.

ERIC Abstract:
Trends in college attendance of African-American and White high school graduates were examined, with a focus on whether African-American and White students of similar academic achievement and economic levels attend colleges at similar rates. Data were obtained form the Current Population Survey, the Higher Education General Information Survey, and the High School and Beyond Study (HS&B). The racial or ethnic distribution of persons who have completed college is examined, along with enrollment patterns of persons over age 24. Key findings include: the number and proportion of African-American 18- to 24-year olds who attended college increased substantially between 1970 and 1985; within the same academic achievement groups, African-American high school graduates attend college in proportions equal to or greater than the proportions of Whites who attend; within the same income groups, African-American high school graduates attend college in proportions equal to or greater than the proportions of Whites who attend; and data from the National Assessment of Educational Progress indicate that substantially fewer African-American and White 11th graders read at the level expected of college freshmen. A five page reference list and numerous tables are provided. Cited from: SW, ERIC Document #ED284463.

Chapman, D. W., Johnson, R. H., and Stark, J. S. (1980). Final Report of Project Choice: A Center for Helping Organizations Improve Choice in Education. Ann Arbor, MI: Center for the Study of Higher and Postsecondary Education.

Chisholm, M., and Cohen Bethaviva. (1982). A Review and Introduction to Higher Education Price Response Studies. Working Paper Series. Boulder, CO: National Center for Higher Education Management Systems.
Notes from microfiche:
Paper part of a working series by National Center for Higher Education Management Systems (NCHEMS) from the National Institute of Education (NIE). Document has several goals:
1) to provide a basic background in the economic theory used to investigate the relationship between price and student demand (a.k.a. price-response);
2) to categorize the various analytical techniques used by researchers in the field and to describe some of the basic properties and assumptions inherent in each methodology;
3) to review some of the major studies and discuss their relationship to the economic theory and analytical methodology that they employ;
4) to summarize some of the findings and conclusions that are commonly reported; and
5) to provide a selected bibliography that points the reader to the literature available on this subject.

Chapter II opens with a brief summary of the relationship between the price of attendance and enrollment. Price-response is defined as the "absolute change in enrollment that would be caused by a fixed dollar change in price" (p. 4).

Chapter III reviews, or other works that review, synthesize or critique price-response studies from 1974 to 1980. Some articles reiterate some common results from empirical research, namely that:

1) the price of higher education does affect enrollment behaviors;
2) as the price goes up, enrollment goes down if all other things remain the same; and
3) the effect of price seems to decrease as family income goes up (Carlson et al, 1974; Hyde, 1978; and CPEC, 1980).

Others are critical of key assumptions the researchers make about consumerism in higher education and of research methods (Weinschrott, 1977, McPherson, 1978).

Chapters IV and V discuss different statistical techniques used by researchers to examine the relationship between price and demand in price-response, including linear regression, log-log demand functions, mixed-model demand functions, linear probability models, and logit analysis. The authors conclude from this review of methodologies that "the literature on the effects of price on the demand of students for higher education is quite complicated, difficult to evaluate, full of methodological problems, and hard to apply to specific institutions" (p. 35).

Chapter VI offers some common results from almost all types of studies done regarding price-response. These conclusions include: 1) that as price goes up, demand falls; 2) other factors, such as the student's sex, can moderate the effect of price on student demand (e.g., male enrollment from 1964 to 1975 was not affected by price (Thrasher, 1978) while females were much more responsive to price stimuli (Moor, 1979)); and 3) in addition, older students are more responsive to price changes than younger students (CPEC, 1980).

The authors conclude that the following factors must be taken into mind when institutional researchers attempt to find relationships between price and enrollment at their institutions: 1) there must be adequate variation in the price variable; 2) factors other than prices effecting enrollment behaviors must be considered; 3) one must be certain that price changes cause the enrollment changes and not vice-versa; and 4) that increases/decreases in student financial aid is considered when evaluating response to price increases. The document ends with a bibliography containing ~65 references (68).

ERIC Abstract:
Background information needed to understand the literature on the impact of price on college attendance (i.e., price-response literature) is provided. After briefly introducing price theory and its use in demand studies in higher education, the major expository articles are reviewed, and major analytical methods used by researchers are examined. Examples from studies that typify these approaches are included, and important facts learned from the literature are summarized. Whether the research was done with multiple regression or with conditional logit analysis, price was seen as an important factor influencing student demand; as price goes up, demand falls. The effect of price varies, however, depending on both the type of student and type of institution. Other factors, such as student's sex, can moderate the effect of price on student demand. Price was significant in explaining female full-time-equivalent enrollment. The impact of a price change affects students differentially depending on their income and ability levels. The impact also differs across types of institutions. Attention is directed to use of the following analysis techniques: regression analyses with different demand functions, linear probability models, and logit analysis. Cited from: SW, ERIC Document #ED246805.

Cohen, A. M. (1990). The case for the community college. American Journal of Education, 98(4), 426-42.

Article Abstract:

The American public community colleges were established to accommodate the 20th century drive for more years of education. Located in every state, they enroll 5 million students, two-thirds of whom attend part time. Their occupational programs lead toward both immediate employment, as in clerical work, and higher-status careers, such as those in the health and engineering technologies that may require additional schooling. Their transfer function is indistinct because the data and definitions are not stable and because their students have variant goals. The colleges could be strengthened if the states developed fiscal incentives to be awarded to institutions that increased their proportion of students who gained associate degrees, entered employment in the field of which they were prepared, and/or matriculated at a four-year college or university.

Conklin, M. E., and Dailey A. R. (1981). Does consistency of parental educational encouragement matter for secondary school students? Sociology of Education, 54, 254-62.

ERIC Abstract:

Hypothesizes that consistent parent encouragement through secondary school years is an important cause of students aspiring towards higher education and entering four-year colleges. Findings supported the hypothesis. Cited from: AM, ERIC Document # EJ255583.

Dougherty, K. (1987). The effects of community colleges: Aid or hindrance to socioeconomic attainment? Sociology of Education, 60(2), 86-103.

Article Abstract:

The community college is both important and controversial. It now enrolls 36 percent of all students in college. But there is much debate over whether it aids or hinders its students' socioeconomic attainment. This paper aims to measure the community college's effects and to explain how those effects are produced. In the first section, (I) critically synthesize research comparing the effects of community colleges and the effects of other postsecondary institutions on educational attainment and economic success. (I) conclude that baccalaureate aspirants entering community colleges attain less educationally and economically than comparable students entering four-year colleges. But community-college entrants seeking only subbaccalaureate vocational training seem to get more education than if they had entered a four-year college. However, the research allows no conclusion on which type of institution best promotes the economic success of subbaccalaureate aspirants. In the second section of the paper, (I) develop a model of the factors that impede the educational attainment of community-college entrants who aspire to a baccalaureate.

PsychInfo Abstract:

Synthesizes research comparing the effects of community colleges and the effects of other postsecondary institutions on educational attainment and economic success. It is concluded that baccalaureate aspirants entering community colleges attain less educationally and economically than comparable students entering 4-year colleges. But community-college entrants seeking only subaccalaureate vocational training seem to get more education than if they had entered a 4-year college. However, the research allows no conclusion on which type of institution best promotes the economic success of subbacalaureate aspirants. A model of the factors that impede the educational attainment of community-college entrants who aspire to a baccalaureate is developed.

Ekstrom, R. B. (1991). Attitudes toward borrowing and participation in post-secondary education. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Boston, MA.

Notes from microfiche:

This paper reports the results of an exploration of the relationship between high school seniors' attitudes about borrowing for education and the postsecondary education choices they make. Specifically, it compares seniors who said they would not borrow if they needed extra money for college (students who would prefer to delay college, go to a less expensive type of college, or work part-time) with seniors who would take a loan in such circumstances. This study utilized the base year (1982), first follow-up (1984) and second follow-up (1986) components of the High School and Beyond (HS&B) survey. Methods included descriptive analyses and relational or causal approaches to identity the variables significantly associated with college entrance, type of college attended, and type of enrollment to see if attitude about borrowing is significant after controlling for other variables such as student background, high school achievement, and educational aspirations. Results indicate that high school seniors who said they would choose to borrow, when asked what they would do if college costs were $1500 more than they, their family, and a scholarship could provide, were significantly more likely to attend college in the next four years than were students who said they would choose another option (delaying college entrance, attending a less expensive college, or getting a job). This held true even after controlling for educational aspirations, tested achievement, influence from others, and socioeconomic status. This finding supports the contention that students who are reluctant to borrow are less likely to enroll in postsecondary education. Among the students who did enroll in college, willingness to borrow was significantly associated with attendance at a four-year college rather than a two-year college and with full-time rather than part-time attendance. This may mean that recent changes in financial aid packaging, with fewer grants and more loans, have had an impact not only on college enrollments but also on the type of college that students attend and on the proportion of students enrolling in college on a part-time basis. The results also suggest that, all else being equal, students who are knowledgeable about financial aid sources may be more likely to enroll in college than are students with less knowledge of these sources.

ERIC Abstract:

A study explored the relationship between high school seniors' attitudes about borrowing for education and the postsecondary education choices they make. With the 1982 "High School and Beyond" data the study used a sample of 9,625 students who were high school seniors in the spring of 1982 to do a descriptive analysis to compare those who were willing to borrow with those who were not and to do a relational analysis to see if attitudes about borrowing were significant after controlling other variables. Results indicated that those willing to borrow were significantly more likely to attend college than those who said that they would delay entrance, attend a less expensive school or get a job. This held true even after controlling for other variables such as educational aspirations, tested achievement, influence from others, and socioeconomic status. This finding supports the contention that students who are reluctant to borrow are less likely to enroll in postsecondary education. Among students who did enroll in college, willingness to borrow was significantly associated with attendance at a four-year college rather than a two-year college and with full-time rather than part-time attendance. Includes 14 tables, 1 figure and 73 references. Cited from: JB, ERIC Document #ED339304.

Eyermann, T. S. (1995). Destiny challenged: Cost and choice factors related to low income student matriculation at a private institution. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Orlando, FL.
ERIC Abstract:
This paper examines some of the factors that affect the college choice of students from low-income families, specifically as it relates to college costs, and presents the results of a qualitative study on the factors that motivated the college attendance and choice of eight students from low-income families enrolled at a small, moderately selective Christian liberal arts college. In-depth interviews with the eight students revealed that there was a predisposition to attend college through either being told from an early age that they would go or experiencing a critical incident which crystallized the importance of college attendance. Students tended to choose the institution they attended due to its small size and friendly, home-like atmosphere. The majority of the students interviewed did not rely on their parents for any significant financial support, and were worried about the costs involved in attending a private college where tuition approached $13,000 per year. All of the students relied on grants, loans, and/or part-time employment to cover their educational expenses. Other factors affecting college choice, such as peer and parent influence and prior knowledge of the college, were also explored. (Contains 25 references.) Cited from: MDM, ERIC Document #ED391416.

Flint, T. A. (1992). Parental and planning influences on the formation of student college choice sets. Research in Higher Education, 33(6), 689-708.
ERIC Abstract:
A study investigated to what extent parental socioeconomic and educational background and college planning variables (familiarity with admissions, aspirations, financial planning) influenced the kinds of characteristics they looked for in colleges. Subjects were 1,332 parents of eighth graders. Results are presented and discussed in the context of other similar research. Cited from: MSE, ERIC Document #EJ456111.

Fuller, W. C., Manski, C. F., and Wise, D. A. (1982). New evidence on the economic determinants of postsecondary schooling choices. Journal of Human Resources, 17(4), 477-95.
Article Abstract:
The effects of tuition costs, financial aid, and individual attributes on college choice are analyzed using a conditional logit model. The results confirm that financial aid can be an important determinant of postsecondary school attendance and that individual academic ability relative to the academic standards of a college is an important determinant of which of available college alternatives is chosen.

ERIC Abstract:
The effects of tuition costs, financial aid, and individual attributes on college choice are analyzed using a conditional logit model. The results confirm that financial aid can be an important determinant of postsecondary school attendance. Cited from: Author/CT, ERIC Document # EJ269493.

Gardner, J. A. (1987). Transition from High School to Postsecondary Education: Analytical Studies. Contractor Report. Washington, DC: Superintendent of Documents, U.S. Government Printing Office.
ERIC Abstract:
Factors affecting access to postsecondary education for college-age youth were studied, with emphasis on personal characteristics and institutional policies that influence educational aspirations

and postsecondary enrollments. Data were primarily derived from two databases: the High School and Beyond Study and the National Longitudinal Study of the High School Class of 1972. Using data from 1980 and 1972, high school seniors' educational expectations were examined to determine the influence on attendance of their racial/ethnic group, gender, socioeconomic status, family income, academic performance, and geographic location. The types of colleges selected by students and students' personal characteristics were compared, and factors influencing full-time and part-time attendance and academic fields chosen by students were assessed. Student use of four sources of financing was reported: grants (including scholarships), loans, assistance from relatives, and their own funds. Data for specific aid programs are included. Cited from: SW, ERIC Document #ED280370.

Grubb, W. N. (1989). Access, Achievement, Completion, and "Milling Around" in Postsecondary Vocational Education. Berkeley, CA: MPR Associates.

ERIC Abstract:

This study analyzes the results of the increased access of students to postsecondary vocational education, especially in two-year colleges, in terms of completion rates and job placement. Data examined include the following: (1) initial enrollments in higher education; (2) fields of study in postsecondary education; (3) progress through institutions of higher education and the tendency to drop out; (4) completing credentials; (5) the special problems of dropout and completion of minority students; (6) the nature of transfers among institutions; (7) course enrollments and credits earned by noncompleters; (8) late entrants into higher education; (9) employment during postsecondary education; (10) postsecondary vocational institutions compared; and (11) vocational students in postsecondary education. The study found that although access to postsecondary education has expanded, some of the increased enrollment may serve no purpose if students are "milling around" without clear goals. However, the study concludes that it is still unclear how to interpret many of these results–are students who fail to complete credentials really dropouts, are they experimenters who have learned that higher education is not for them, or have they learned what they needed for employment? (In addition to 16 tables in the text, the document includes an appendix of technical notes and 48 tables comprising the greater part of the report.) Cited from: KC, ERIC Document #ED315548.

Grubb, W. N. (1991). The decline of community college transfer rates: Evidence from national longitudinal surveys. Journal of Higher Education, 62(2), 194-222.

ERIC Abstract (from earlier, non-published version)

Using two nationally representative and longitudinal data sets, a study was conducted to examine trends in transfer from community colleges to four-year colleges. These data sets followed the high school classes of 1972 and 1980 into postsecondary education. A comparison of the educational outcomes of the two cohorts of students revealed the following: (1) the likelihood of transferring to a four-year college without a credential declined, especially for students entering public technical institutes and private vocational schools; (2) the proportion of students completing academic associate degrees declined, and the likelihood of transferring among those with such credentials also declined (from 68.7% in the Class of 1972 to 48.9% in the Class of 1980); (3) the proportion of students earning vocational associate degrees increased, but the likelihood of those with such credentials transferring decreased from 31.7 percent to 23.2 percent; (4) those with vocational associate degrees were less than half as likely to transfer as those with academic associate degrees; (5) rates of completing certificates increased in technical institutes and remained stable in community colleges, but certificate completers were much less likely than degree completers to transfer; and (6) transfer rates were higher for males, white students, high socioeconomic status students, and those who were in the academic track rather than the general or

vocational tracks during high school. Many different factors explain the decline of transfer rates, including the changing demographic backgrounds of students, declining achievement during high school, a collapse of career counseling in the high school, an increase in the numbers of "experimenters" in community colleges, the shift from academic to vocational programs within community colleges, the apparent weakening of academic associate degree programs as routes to transfer, and declining federal aid. An appendix containing student transfer data is attached. Cited from: JMC, ERIC Document #ED315125.

Grubb, W. N., and Tuma, J. (1991). Who gets student aid? Variations in access to aid. Review of Higher Education.
ERIC Abstract:
National data reveal postsecondary students in proprietary schools and vocational education are much more likely than others to receive financial aid, and community college students are much less likely. Because of community college student sensitivity to costs and because evidence indicates aid is effective in two-year colleges, the pattern is worrisome. Cited from: Author/MSE, ERIC Document#EJ430104.

Hamrick, F. A., and Stage, F. K. (1995). Student predisposition to college in high minority enrollment, high school lunch participation schools. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Orlando, FL.
ERIC Abstract:
This study examined variables related to college predisposition among students of different ethnic groups who attended schools enrolling high percentages of minority students and high percentages of students participating in free or subsidized school lunch programs. It is based on a subset of data from the 1988 National Education Longitudinal Study, namely 739 African-American, 727 Hispanic, 329 Anglo American, 120 Asian/Pacific Islander, and 62 Native American eighth graders. In the analysis of the overall eighth grade model, participation in school activities was significantly associated with background variables such as high family socioeconomic status, for example, and was itself a significant variable in modeling predisposition to attend college. However, in the aggregate model of eighth graders at high minority enrollment, high school lunch program participation schools, ethnicity was the only background variable significantly associated with school activities participation, and such participation proved to be insignificant in modeling college predisposition. Explained variance in college predisposition was highest for the model using data from eighth graders in general (50 percent) and lowest in the model using African-American student data (21 percent). An appendix contains a list of variables and other statistical data. (Contains 16 references.) Cited from: MDM, ERIC Document #ED391418.

Hanson, W. L., and Stampen, J. O. (1989). The financial squeeze on higher education institutions and students: Balancing quality and access in financing of higher education. Journal of Education Finance, 15(1), 3-20.
ERIC Abstract:
Places the financial pressures faced by students, their parents, and colleges and universities in paying higher education costs within the context of long-run, pendulum-like swings in society's interest in promoting access to higher education and enhancing its quality. Higher education is in a transitional period and moving toward improving quality. Includes 13 references. Cited from: MLH, ERIC Document #EJ422764.

Hauptman, A. M. (1990). The College Tuition Spiral: An Examination of Why Charges are Increasing. New York: Macmillan, and the American Council on Education and The College Board.
ERIC Abstract:
Rapid increases in college charges for tuition, fees, and other costs of attendance are analyzed, through an examination of national data sources and case studies of individual institutions. Chapter 1 offers an overview of trends, assesses the causes of increasing college charges, and offers directions for additional research. Chapter 2 explores in more detail the major explanations for the rise of college charges, including: (1) colleges face increasing prices, (2) increased tuition are paying for expanded services, (3) nontuition revenue sources are contracting, (4) student aid leads institutions to raise their charges, (5) competitive pressures have led to tuition increases, and (6) the decline in the traditional college-age group may be a crosscutting factor. Chapter 3 outlines future prospects for college tuition increases. The report concludes that a number of factors contribute to the college cost dilemma, and that distinctly different reasons and patterns emerge for the different sectors of higher education. Appendices contain basic data on trends in college charges and expenditures, and an annotated bibliography of 38 studies, reports, and data sources concerning college costs and prices. Cited from: JDD, ERIC Document #ED320502.

Hauptman, A. M. (1990). The Tuition Dilemma: Assessing New Ways to Pay for College. Washington, DC: The Brookings Institution.
ERIC Abstract:
This book is designed as a guide to existing and proposed higher education tuition financing plans. The first chapter looks at recent patterns in higher education financing and participation noting the rapid increase in tuition and other college costs and the corresponding changes in participation patterns. Chapter 2 examines tuition prepayments, guarantees, and savings plans and debates concerning the benefits to participants and who pays for the benefits. Specific programs reviewed include the University of Pennsylvania prepayment plan, the Duquesne University (Pennsylvania) tuition guarantee program, Michigan and Massachusetts state plans, federal savings incentives, and the College Sure Certificate of Deposit. Chapter 3 looks at longer term efforts to develop alternative forms of the traditional student aid programs of loans, grants, and work-study. This chapter treats alternative loan programs, assured access for low-income and minority students (e.g., the "I Have a Dream" plan), merit-based aid for needy students and aid linked to community, public, or national service. Chapter 4 discusses the issues raised by the new financing plans, some methods for evaluating these proposals, and the appropriate objectives of public policy in the realm of financing higher education. An index to the book is included. Cited from: JB, ERIC Document #ED338179.

Hauser, R. M. (1992). The decline in college entry among African-Americans: Findings in search of an explanation. In P. Sniderman, P. Tetlock, and E. Carmines (Eds.), Prejudice, Politics, and Race in America Today (pp. 271-306). Stanford, CA: Stanford University Press.

Hauser, R. M., and Anderson, D. K. (1991). Post-high school plans and aspirations of Black and White high school seniors: 1976-86. Sociology of Education, 64(4), 263-77.
Article Abstract:
The chances of college entry declined among African-American Americans from 1977 through the mid-1980s, absolutely and relative to those of Whites. During the decline, the post-high school plans of African-American and White seniors followed similar trends. Annual measurements from the Monitoring the Future surveys show no trends among African-Americans' or Whites' plans to attend technical or vocational school or plans or aspirations to complete a 2-year college program. Plans and aspirations to enter the armed forces increased among African-Americans and Whites,

and the increase in plans was larger among African-Americans than among Whites. Plans and aspirations to complete a 4-year college program grew among African-Americans and Whites, and the increase in plans was smaller among African-Americans than among Whites. The upward trends among African-Americans, but not among Whites, were driven by favorable changes in social background. Changes in aspirations among African-American high school seniors cannot account for the decline in their chances of entering college.

ERIC Abstract:
Presents results of studies comparing the plans and aspirations of African-American and White high school seniors. Reports that both groups' plans followed similar trends during a period when the chances of college entry declined for African-Americans. Attributes trends toward more education among African-Americans but not Whites to favorable changes in social background. Cited from: DK, ERIC Document #EJ442184.

Hearn, J. C. (1991). Academic and nonacademic influences on the college destinations of 1980 high school graduates. Sociology of Education, 64, 158-71.
Article Abstract:
Social scientists and policymakers have long been interested in equality of opportunity to pursue postsecondary education. This research focused on one aspect of that issue, the relationships between high school graduates' personal characteristics (ability, achievements, expectations, socioeconomic status, race/ethnicity, and gender) and the nature of the postsecondary institutions they attend. Based on national data for college attenders from the high school class of 1980, the findings suggest that nonacademic factors, particularly socioeconomic background, affected graduates' postsecondary destinations. For example, students from lower-income families were particularly likely to attend lower-selectivity institutions, regardless of their levels of academic ability, achievement, and expectations. The possible reasons for the persistence of such inequalities, despite policy efforts to limit or remove them, are discussed.

ERIC Abstract:
Focuses on relationships between high school graduates' personal characteristics and the nature of the postsecondary institutions they attend. Suggests that within the matching process is a sorting mechanism that reinforces nonmeritocratic tendencies. Analyzes national data for the high school class of 1980. Finds that socioeconomic background particularly affects choice of college. Cited from: DK, ERIC Document #EJ438421.

Hearn, J. C. (1988). Attendance at higher-cost colleges: Ascribed, socioeconomic and academic influences on student enrollment patterns. Economics of Education Review, 7, 65-76.
Article Abstract:
Socioeconomic and ascriptive factors clearly influence high school students' academic performance, which in turn influences students' eventual college choices. A critical policy issue involves whether or not socioeconomic and ascriptive factors also have influences on college choices that are independent of their influences on academic performance. The present analysis addresses this issue, focusing upon the costliness of the colleges attended by a recent national sample of high school graduates. The structural equation results suggest that SES and ascriptive factors do have independent effects, but they are relatively minor and more "social" than "economic" in nature.

ERIC Abstract:
Socioeconomic and ascriptive factors clearly influence high school students' academic

performance, which in turn influences eventual college choice. This study shows that the socioeconomically disadvantaged who survive academically prior to high school graduation are attending colleges costing approximately the same as those of more advantaged students with similar talents and accomplishments. Includes three tables and 42 references. Cited from: MLH, ERIC Document # EJ376200.

Hearn, J. C. (1988). Determinants of postsecondary education attendance: some implications of alternative specifications of enrollment. Educational Evaluation and Policy Analysis, 10(2), 172-85.

Article Abstract:

This paper proposes four defensible alternative definitions of "postsecondary education attendance," then uses data for 1980 high school seniors to examine influences on attendance under each of the definitions. The results suggest that these influences vary somewhat, depending upon the enrollment definition one chooses. For example, the findings suggest that studies focusing solely upon a traditional definition of enrollment (e.g., entry into a 2- or 4-year institution immediately after high school graduation) may overstate the limiting effects of socioeconomic factors on overall enrollment, and may also understate the positive effects of being female. Some policy studies make recommendations on the basis of analysis using traditional enrollment definitions, even though such definitions are much more restricted than those of the major financial aid programs (e.g., the Federal Pell Grant program). The findings of the present study suggest that such studies may misspecify policy impacts. The implications of these results are discussed.

ERIC Abstract:

Four definitions of "postsecondary education attendance" are proposed. High School and Beyond data for 1980 high school seniors and a 1982 follow-up were used to study influences on attendance under each definition. The influences varied depending on the definition, suggesting that policy impacts may not always be correctly determined. Cited from: SLD, ERIC Document #EJ381183.

Hearn, J. C. (1992). Emerging variations in postsecondary attendance patterns: An investigation of part-time, delayed, and nondegree enrollment. Research in Higher Education, 33(6), 657-87.

Article Abstract:

This research assessed hypotheses regarding several nontraditional styles of postsecondary enrollment: enrolling part-time, delaying postsecondary enrollment for a year or more beyond high school graduation, and entering nondegree-granting programs. The research was conducted using a sample of 8,203 high school graduates drawn from the national High School and Beyond data set. Among the findings of the multivariate statistical analyses is evidence that socioeconomically disadvantaged graduates have disproportionately pursued each of the nontraditional enrollment options, even in the context of controls for the respondents' differing academic characteristics. The theoretical, management, and policy implications of these results are discussed.

ERIC Abstract:

Based on data on 8,203 high school graduates from the national High School and Beyond study, it was found that socioeconomically disadvantaged graduates have pursued nontraditional postsecondary enrollment options (part-time, delayed, and nondegree programs), even when data were controlled for differing academic characteristics. Theoretical, management, and policy implications are discussed. Cited from: Author/MSE, ERIC Document #EJ456110.

Hearn, J. C. (1984). The relative roles of academic, ascribed, and socioeconomic characteristics in college destinations. Sociology of Education, 57, 22-30.
Article Abstract:
A multiple regression analysis using a large, nationally representative sample of college freshmen of 1975 suggests that educationally relevant factors have greater power in explaining the nature of college destinations than ascriptive or socioeconomic background factors, but the latter still play a significant role, net of educational factors. Specifically, it appears that both the academically and socioeconomically "rich" become richer (i.e., attend schools having superior intellectual and material resources) while the academically and socioeconomically "poor" become poorer. The net influences of the ascriptive factors of race, ethnicity, and sex are more mixed. The implications of these most recent findings on the topic of college destinations are discussed.

ERIC Abstract:
Though educationally relevant factors are the most important in explaining college destinations, socioeconomic factors still play a big role. Influence of the ascriptive factors of race, ethnicity, and sex are more mixed in their effect. The academic and socioeconomic "rich" become richer, while the academic and socioeconomic "poor" become poorer. Cited from: Author/CS, ERIC Document #EJ294011.

Hearn, J. C., and Longanecker, D. (1985). Enrollment effects of alternative postsecondary pricing. Journal of Higher Education, 56(5), 485-508.
PsychInfo Abstract:
Reviews the effect on college and university enrollment of 2 methods of financing public postsecondary education: blanket and targeted subsidies. Although targeted subsidies generally promote efficiency and equity, 3 reservations about their assumed effects on enrollment are discussed. (71 references).

Heller, D. E. (1997). Access to Public Higher Education, 1976 to 1994: New Evidence from an Analysis of the States. Unpublished doctoral dissertation, Harvard University, School of Education, Cambridge, MA.

Horn, L., and Maw, C. (1995). Minority Undergraduate Participation in Postsecondary Education. Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
ERIC Abstract:
This report provides statistical information on minority undergraduate participation in postsecondary education and postsecondary persistence among racial-ethnic groups, based on the National Postsecondary Student Aid Study (NPSAS). The data indicate that, after a dramatic increase in minority enrollment in the 1960s and 1970s, there was uneven progress made in the 1980s. The proportion of African-American students enrolled in institutions of higher education decreased from 9.2 percent in 1980 to 8.9 percent in 1990. Among African-American undergraduates, nearly two-thirds were women, compared with 53 percent of Hispanics and 55 percent of Whites. The report also indicates that African-American students were more likely to be enrolled in private, for-profit institutions and less likely to be enrolled in 4-year institutions than white students. Undergraduates who attended historically African-American colleges and universities were more likely to aspire to an advanced degree than were students at other 4-year institutions. Persistence rates for 1989-90 beginning postsecondary students pursuing a bachelor's degree tended to be higher for Asian/Pacific Islander students than for African-American students. Statistics on college choice and student financial aid are also included. Two appendixes contain a glossary and technical notes on methodology. Cited from: MDM, ERIC Document #ED383276.

Horvat, E. M. (1996). African-American students and college choice decision making in social context: The influence of race and class on educational opportunity. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY.
ERIC Abstract:
This report examines the college aspirations and decision making factors gathered from 53 interviews with African-American, female, college-bound students, their parents, friends, college counselors, teachers, and school staff. The goal was to reveal how the students' lives and their access to postsecondary education have been framed and structured by the influences of race and class in modern schools and society. Subjects were students at three urban California high schools. Data gathered included transcribed and coded interviews as well as extensive ethnographic observational data and documents. The schools were chosen for their ethnic and social differences: a predominantly African-American public school with predominantly lower class families; a public, racially mixed school of mixed social class composition; and a predominantly white, private, upper social class school. Findings reveal that the students chose colleges where they could see themselves in the form of other students like themselves who already attend the college; race and class defined the choices that fit a particular student. The high schools they attended acted as templates that encouraged particular kinds of action. The expectations of the students, rooted in race and class differences, created different worlds of opportunity and created different patterns of access to higher education. The data further illustrate how race did not have less importance than class in defining these students' habits, but rather that race was a very clear marker of class membership and class distinction that greatly impacted their decision making. (Contains 41 reverences). Abstract from: NAV, ERIC Document #ED394463.

Hossler, D. (1984). Enrollment Management: An Integrated Approach. New York: The College Board.

Hossler, D., Braxton, J., and Coopersmith, G. (1995). Understanding student college choice. In F. K. Stage, et al. (Eds.), College Students: The Evolving Nature of Research. Needham Heights, MA: Simon and Schuster.

Hossler, D., and Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. College and University, 62(3), 207-21.
ERIC Abstract:
A model of the decision-making process for college choice that has three phases (predisposition, search, and choice) is proposed, and the implications of this model for college and government policy formation are examined. Cited from: MSE, ERIC Document #EJ354226.

Hossler, D., and Maple, S. (1993). Being undecided about postsecondary education. Review of Higher Education, 16(3), 285-307.
ERIC Abstract:
A longitudinal study compared Indiana ninth graders (n=178) with and without postsecondary education plans. Results indicate decided and undecided students can be differentiated by the amount of time spent thinking about postsecondary options, amount of information received regarding those options, academic achievement, and student and parent educational expectations. Cited from: Author/MSE, ERIC Document # EJ462718.

Hossler, D., Schmit, J., and Bouse, G. (1991). Family knowledge of postsecondary costs and financial aid. Journal of Student Financial Aid, 21(1), 4-17.
Article Abstract:
Federal policymakers have recently expressed interest in family knowledge of student financial aid and postsecondary costs and the impact of family knowledge on student access. Analyzing a longitudinal data set of Indiana high school students, this study looks at student and parental knowledge of student financial aid and postsecondary costs. The results suggest that parents are more interested than students in information about postsecondary costs and student financial aid. Furthermore, the findings indicate that efforts to increase family knowledge should simultaneously focus on general information about aid and costs rather than on details about specific aid programs. This article was presented at the Seventh Annual Meeting of the Student Financial Aid Research Network Conference, Washington, DC, May 16, 1990.

ERIC Abstract:
Analysis of data from a longitudinal study of Indiana high school students (n=56) reveals that parents are more interested than students in information about postsecondary education costs and student financial aid. It also suggests efforts to increase family knowledge should focus on general information rather than specific aid programs. Cited from: Author/MSE, ERIC Document #EJ430083.

Hossler, D., and Stage, F. K. (1992). Socioeconomic or race differences? Explaining Black and White adolescent females' plans for education. Urban Education, 27(1), 41-58.
ERIC Abstract:
Analyzes African-American and White females' plans for education for 4,573 high school seniors in 1980 from the High School and Beyond Survey. When other factors are controlled, African-American females have plans for higher levels of education, as do females from high-income families and those with mothers with more education. Cited from: SLD, ERIC Document #EJ445342.

Hossler, D., and Vesper, N. (1993). An exploratory study of the factors associated with parental saving for postsecondary education. Journal of Higher Education, 64(2), 140-65.
ERIC Abstract:
Using longitudinal college student (n=2,497) and parent data and interviews of a subsample (n=60), a study examined factors associated with parental savings for students' postsecondary education. Results suggest that socioeconomic status, student educational aspirations, and the extent to which parents think they will need outside financial help influence family savings. Cited from: Author/MSE, ERIC Document #EJ461422.

House Committee on Education and Labor, United States Congress. (1985). Staff Report on the Hispanic Access to Higher Education of the Committee on Education and Labor. House of Representatives, Ninety-Ninth Congress, First Session. Washington, DC: Author.
ERIC Abstract:
Key issues affecting Hispanic participation in higher education are evaluated, with attention to access, retention, and transfer. Societal factors influencing access are also covered: migration, technology, employment and income levels, and secondary schooling. In addition, postsecondary education in Puerto Rico is addressed. Hispanics constitute 6.4 percent of the population in the United States, but only 3.7 percent of undergraduate, 2.2 percent of graduate, and 2.3 percent of professional school enrollment. In this regard, Hispanics fare worse than African-Americans and Asians. In 1980, Hispanics earned 2.3 percent of all bachelor's degrees and 3 percent of all

doctorate degrees awarded in the United States. At present, a majority of Hispanics attend community college. These students, generally, neither transfer nor receive degrees. Current financial aid policies have reduced Hispanic access to sources of student aid, since there are more applicants and declining resources. In addition, increasingly complex application procedures and stricter eligibility requirements act as a barrier to access to Hispanics. There is a need for improved community college instruction and counseling, as well as better coordination between two- and four-year colleges. The overwhelming number of Hispanics enrolled in four-year colleges are Puerto Ricans in Puerto Rico. Cited from: SW, ERIC Document #ED266716.

Hurtado, S., Kurotsuchi Inkelas, K., Briggs, C., and Rhee, B.-S. (1997). Differences in college access and choice among racial/ethnic groups: Identifying continuing barriers. Research in Higher Education, 38(1), 43-75.

Article Abstract:

This study focuses on the college application behaviors of students from various racial/ethnic groups in order to understand differences in access and college choice. Student characteristics, predispositions, academic abilities, and income levels were taken into account in our analyses. We analyzed data from the National Education Longitudinal Study (NELS) and the Beginning Postsecondary Student Longitudinal Study (BPS) and found significant group differences in preparation behaviors, college application behavior (number of colleges to which students applied), and attendance at their first choice of institution. The results of this study call attention to the need for campuses to evaluate the potential effects of policy decisions that may impact student choice for difference populations of students.

ERIC Abstract (from earlier non-published version):

A study investigated the college application behaviors of students from different racial/ethnic groups (Whites, African-Americans, Asian Americans, Hispanic Americans) to understand differences in the college search and choice process. Data were from drawn from two large national longitudinal studies, the National Education Longitudinal Study (1988) and the Beginning Postsecondary Student Longitudinal Study. Analysis revealed significant group differences in college application behavior (number of colleges applied to, time of submission of application), first choice of institution, and tuition cost. Substantial data tables showing analyses are included. Asian Americans were most likely to follow assumptions underlying traditional college choice models. Latino students were the least prepared regarding knowledge about college and least likely to fit traditional college choice models. It is concluded that the findings suggest a need for campuses to evaluate the potential effects of policy decisions that may affect student choice for different applicant populations. Implications for institutional research needs are also noted. (Contains 7 tables, 5 appendixes, and 18 references.) Cited from: MSE, ERIC Document #ED397733.

Hurtado, S., Kurotsuchi, K., and Sharp, S. (1996). College entry by age groups: Paths of traditional, delayed-entry, and nontraditional students. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY.

Jackson, G. A. (1978). Financial aid and student enrollment. Journal of Higher Education, 49(6), 548-74.

ERIC Abstract:

Financial aid has historically rewarded accomplished students or assisted needy ones. Recent policies reflect a new goal: to increase college enrollment. The power of financial aid to change prospective students' minds is assessed in this study. It is found that most aid intended to attract

new students would go to students who would have enrolled without aid. Cited from: Author/LBH, ERIC Document #EJ188999.

Jackson, G. A. (1990). Financial aid, college entry, and affirmative action. American Journal of Education, 98(4), 523-50.

Article Abstract:

To the extent that financial aid policy seeks to affect college-entry patterns, its framers presume that underrepresented minority students respond more favorably to a given financial aid package than other students do. This piece of financial aid dogma has been difficult to prove, for various technical and sampling reasons. This research addresses these problems by analyzing African-American, Hispanic, and White subpopulations separately, exploiting the sampling design of the High School and Beyond surveys. African-American students, the results suggest, do respond more positively than White students to financial aid, all else equal. But financial aid effects on Hispanic students are difficult to distinguish from background effects. These findings imply that financial aid operates both positively and perversely when it is used to equalize college entry across majority and minority populations, and especially that its effects distribute unevenly among minority populations. Uniform financial aid awards probably increase the representation of African-Americans in higher education; they may actually reduce the relative representation of Hispanics.

ERIC Abstract:

Examines effects of financial aid on college entry patterns of African-Americans, Whites, and Hispanics. Uniform financial aid awards probably increase the representation of African-Americans in higher education. For Hispanics, however, family and academic background variables may outweigh the financial aid factor in the decision to enter college. Cited from: DM, ERIC Document #EJ419409.

Jackson, G. A. (1986). MISAA, the fall of Saigon, and college choice, 1972 to 1980. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, San Antonio, TX.

Notes from microfiche:

(NOTE: Similar to Jackson, G. A. (1986). Workable, Comprehensive Models of College Choice, Final and Technical Report. Cambridge, MA: Harvard University.)

This paper examines changes in high school graduates' college choice between 1972 and 1980. This period was chosen for several reasons, including the fact that in 1972 the federal government made increasing involvement in student financial aid, but in 1980, Ronald Reagan was elected and the federal role in individuals' lives was diminished. The conceptual framework for the college choice model includes the influence of family background, academic achievement, and other variables such as institutional characteristics, financial aid, students' aspirations, etc. upon students' decisions on whether or not to enroll in a postsecondary institution. The author utilized two different data sources, the National Longitudinal Study of the High School Class of 1972 (NLS-72) and the High School and Beyond Study (HS&B). Results indicate that while college participation remained relatively stable between 1972 and 1980, HS&B (1980) respondents were more likely to leave college after one year than their NLS-72 counterparts and were somewhat less likely to enter after a year's wait. The strongest correlates of college entry (dependent variable = college attendance or no college) in both 1972 and 1980 were academic track placement, test score, college-going peers, and grades. African-Americans and Hispanics are less likely than other high school graduates to enter college in 1972, and were even less likely in 1980. Yet, when controlling for SES, academic, contextual, and financial variables, African-American and Hispanic students were more likely to enroll in college than the average student with similar characteristics in 1972

and 1980. The author concludes that 1) college choice processes appear remarkably stable over time, and since most influences on college choice also change relatively slowly, this means college participation among recent high school graduates does not fluctuate widely, and 2) major changes in college participation, when they do occur, typically arise from forces that do not produce cross-sectional differences, and in many cases from one-time policy or social changes (p. 22). Contains 17 references and 5 tables.

ERIC Abstract:
Changes in high school graduates' college choices between 1972 and 1980 were investigated, with attention to the importance of different enrollment influences and the distribution of these influences. Analysis of the National Longitudinal Study (NLS) of the High School Class of 1972 and the High School and Beyond (HS&B) surveys revealed that 46.4 percent of the NLS subsample attended two- or four-year colleges in the fall of 1973, compared to 46.0 percent of the HS&B subsample. The data suggest that high school seniors decided whether to enter college in 1980 much as they had in 1972, which means that the Middle Income Student Assistance Act and the end of the U.S. involvement in Vietnam had no substantial effect on students' decisions. The effect on college attendance of the following high school graduate attributes were assessed: race (African-American/Hispanic), sex, geographic region, local cost in 1980 dollars, parents' education, family income in 1980 dollars, test scores, grades, academic programs, college-going peers, and receipt of financial aid. The strongest zero-order correlates of college entry in both 1972 and 1980 were academic track placement, test scores, college-going peers, and grades. Bivariate regression coefficients corresponding to the correlations were also determined. Cited from: SW, ERIC Document #ED268867.

Jackson, G. A. (1986). Workable, Comprehensive Models of College Choice. Final and Technical Report. Cambridge, MA: Harvard University.
Notes from microfiche:
(NOTE: Similar to Jackson, G. A. (1986). MISAA, the fall of Saigon, and college choice, 1972 to 1980. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, San Antonio, TX.)

This paper opens with a brief description of college choice sets via stereotypical case scenarios and develops a conceptual framework for a college choice model including the influence of family background, academic achievement, and other variables such as institutional characteristics, financial aid, students' aspirations, etc. upon students' decisions on whether or not to enroll in a postsecondary institution. The author utilized two different data sources, the National Longitudinal Study of the High School Class of 1972 (NLS-72) and the High School and Beyond Study (HS&B). Chapter 2 summarizes earlier research on this topic and chapter 3 analyzes an analysis using the NLS-72 and HS&B. The central finding from this research is that student-choice patterns remained stable between 1972 and 1980. Negative effects of college choice for African-American and Hispanic applicants declined over the same period with all other controlling factors being equal, but the author notes that "all other factors remaining equal" for African-American and Hispanic applicants is a rarity. The effects of most academic variables, such as test scores and grades, increased somewhat between 1972 and 1980. The effect of financial aid also increased somewhat.

ERIC Abstract:
Results of a study of trends in college-going decisions of new high school graduates between 1972 and 1980 are presented, along with a model of college choice. The focus is the choice between

college and noncollege options. Based on a review of empirical and theoretical work on college choice over the past 25 years, information is provided on key variable categories for each major study, along with the dependent variables and data sources employed. Based on studies of traditional students, 13 critical variables and 10 noncritical variables that may influence college choice are examined. Variables for a college choice model for nontraditional students are also identified. Changes in high school graduates' college choices between 1972 and 1980 are assessed, based on results of the National Longitudinal Study (NLS) of the high school class of 1972 and the High School and Beyond (HS&B) surveys. Work that was required to prepare comparable NLS and HS&B data is also described (i.e., coding, recording, and missing-data procedures). Conferences were held at Harvard University to assess and extend the review of college choice studies and to evaluate the match between data and sample requirements and the national and longitudinal studies. Conference participants are listed. Cited from: SW, ERIC Document #ED275224.

Jacobs, J. A. (1996). Gender inequality and higher education. Annual Review of Sociology, 22, 153-85.
Article Abstract:
This paper reviews a diverse literature on gender and higher education. Gender inequality is more pronounced in some aspects of the educational systems than in others. The analysis distinguishes 1) access to higher education; 2) college experiences; and 3) postcollegiate outcomes. Women fare relatively well in the area of access, less well in terms of the college experience, and are particularly disadvantaged with respect to the outcomes of schooling. Explanations of gender inequality in higher education should distinguish between these different aspects of education and should explain those contexts in which women have attained parity as well as those in which they continue to lag behind men.

Justiz, M. J. (1994). Minorities in Higher Education. Phoenix, AZ: Oryx Press.

Kane, J., and Spizman, L. M. (1994). Race, financial aid awards and college attendance: Parents and geography matter. American Journal of Economics and Sociology, 53(1), 85-97.
Article Abstract:
The impact of race on college and university admission and award decisions is examined using data from the National Longitudinal Study of the High School Class of 1972. The effects of race and other factors on the choice of an individual's educational attainment are also studied. Financial aid award equations are estimated. The results indicate that college and university admissions departments have actively worked to encourage the enrollment of African-American students. It appears that the lower average educational attainment of African-Americans is the result of differences in parental income, education, and geographical location.

Sociofile Abstract:
Examines the impact of race on college and university admissions and financial aid award decisions, using data from the National Longitudinal Study of the High School Class of 1972 (N=6,332). Results indicate that college and university admissions departments have actively worked to encourage the enrollment of African-American students, suggesting that the lower average educational attainment of African-Americans is the result of differences in parental income, education, and geographical location. 6 tables, 24 references. Adapted from the source document. Cited from: Sociological Abstracts, Inc., copyright 1994, all rights reserved.

Kane, T. J. (1994). Race, College Attendance and College Completion. Washington, DC: Office of Educational Research and Improvement.

ERIC Abstract:

This study examined the college attendance and degree completion rates of African-American and White students using census data and data from the class of 1980 of the High School and Beyond Study. Introductory information examines the racial gap in earnings. The following sections consider: differences in educational attainment in relation to wage differences; the effects of standardized test scores, high school characteristics and family background on racial differences in college entry; differences in college retention and the racial gap in educational attainment; differences in colleges attended by African-American and White students; and differences in retention among African-Americans and Whites attending predominantly White institutions. Overall findings include the following: (1) college entry rates of African-Americans were higher at every SAT (Scholastic Aptitude Test) quartile; (2) the mean enrollment rate of African-Americans was lower than for Whites; (3) African-American college completion rates (by SAT quartiles) were generally slightly higher for African-Americans than for Whites; (4) increased access and financial aid had but marginal impact on degree completion rates for African-Americans; (5) enrolling in a historically African-American college or university increased retention rates for African-Americans; and (6) the disproportionate numbers of African-American youth receiving low test scores appeared to be the primary obstacle to African-American student retention. Cited from: DB, ERIC Document #ED374766.

Karen, D. (1991). Politics of class, race and gender: Access to higher education in the United States, 1960-1986. American Journal of Education, 99, 208-37.

Article Abstract:

This article, synthesizing the available (published and unpublished) evidence, describes patterns of inclusion of African-Americans, women, and working-class youth into the system of higher education from 1960 to 1986. Focusing not only on whether access has increased, but on whether these subordinate groups have gained access to elite institutions, this article examines the three groups in and across two periods (1960- 76; 1976- 86) to highlight differential patterns of access and to suggest a plausible explanation involving political mobilization to account for the observed trends. Although the general expansion of the system of higher education since 1960 has led to reduced differentials in access between dominant and subordinate groups, women and African-Americans- who mobilized- were able to gain access even to elite institutions. Working-class youth did not experience such gains. A key factor that mediates these benefits of political mobilization is the recognition of the group as an official category in the society's system of classification. Using a variety of data sources, this article shows that, during times of both mobilization and countermobilization, access to particular levels of the higher education hierarchy generally follows the hypothesized directions. Further research that focuses on the precise mechanisms by which political mobilization produces the observed results is called for.

ERIC Abstract:

Examines college enrollment patterns among African-Americans, women, and working-class youth from 1960 to 1986. Finds that the first two groups gained broad access to elite institutions as a result of mobilization, while working-class youth did not. Political mobilization is seen to benefit groups recognized as official categories. Cited from: DM, ERIC Document #EJ423915.

Kinnick, M. K., and Kempner, K. (1988). Beyond "front door" access: Attaining the bachelor's degree. Research in Higher Education, 29(4), 299-318.

Article Abstract:

Among students with similar characteristics who entered either a two- or four-year institution after high school graduation, factors that appear related to achieving the B.A. among those who begin at a two-year college are (1) clear goals and direction, (2) high motivation to achieve the B.A., (3) early contact with the four-year transfer institution, and (4) rigorous high school course preparation. Quantitative data were used to identify the empirical reality of attaining the bachelor's degree while qualitative data were employed to understand the meaning behind the outcomes. While most research on B.A. attainment measures quantitative outcomes in a causal manner, this study focuses on understanding the human meaning behind the numbers. The authors call for more particular student subgroups and for a multifaceted, all-out effort to change the potency of the community college experience for those planning to transfer.

ERIC Abstract:

A study investigated quantitative and qualitative factors in the attainment of a bachelor's degree among students who began in two year colleges. More research on the nature of the community college experience among particular subgroups and efforts to strengthen the experience for those planning to transfer are recommended. Cited from: MSE, ERIC Document # EJ389145.

Lavin, D. E., and Crook, D. B. (1990). Open admissions and its outcomes: Ethnic differences in long-term educational attainment. American Journal of Education, 98(4), 389-425.

Article Abstract:

The open-admissions policy initiated at the multicampus system of the City University of New York (CUNY) in 1970 has been one of the nation's most ambitious attempts to promote opportunity in higher education. Using longitudinal data spanning 14 years (1970-84), we assess how much opportunity the policy created and how that opportunity translated into educational attainment. A process of cumulative disadvantage appears to depress the attainment of minority students. Weak high school preparation, community-college entry, and full-time work while in college reduce their B.A. attainment rates and increase the time needed to complete the degree. Time to B.A., in turn, contributes to ethnic disparities in the likelihood of completing a postgraduate degree. Nevertheless, under the program, tens of thousands of students entered college who otherwise would not have done so, and many thousands of these entrants ultimately earned degrees. The analyses identify the success and the limitations of open admissions in attempting to narrow ethnic inequalities in educational attainment.

Sociofile Abstract:

In 1970 the largest urban university in the US, the 17-campus (9 baccalaureate institutions and 8 community colleges) City University of New York (CUNY) initiated a policy of open admissions that aimed to promote educational opportunity by providing access to college for large numbers of economically and educationally disadvantaged minority students (African-Americans and Hispanics). Here, longitudinal data gathered via official CUNY records and social surveys on a sample of approximately 5,000 students over the period 1970-1984 are used to investigate the educational and socioeconomic consequences of the open admissions program. Results show that large proportions of graduates took 6+ years to earn a Bachelor of A[illegible] (BA) degree. Minority students were more likely to drop out of college without any degree. Minority entrants who did receive diplomas more often earned associate degrees than did Whites; overall 66 percent of African-Americans and Hispanics never went beyond the associate level, compared with only 40 percent of Whites. Whatever the undergraduate degree received, typically it took minority students

longer to earn it; subsequently, they were less likely to be found among the ranks of master's or advanced degree holders. A process of cumulative disadvantage appears to depress the attainment of minority students; weak high school preparation, community-college entry, and full-time employment while in college reduce BA attainment chances and increase the time needed to complete the degree. Time to BA, in turn, contributes to minority-White disparities in the likelihood of completing postgraduate study. Overall, the long-term educational results of open admissions show a mixed picture. Though the policy could not entirely overcome the effects of early disadvantages, it created opportunities that were well used by many. 31 tables, 2 references. Modified AA. Cited from: Sociological Abstracts, Inc., copyright 1991, all rights reserved.

Lee, V. E., and Frank, K. A. (1990). Student characteristics which facilitate transfer from 2-year to 4-year colleges. Sociology of Education, 63, 178-93.

Article Abstract:

This article investigates the relative importance of social and academic background factors on the probability of transfer to a four-year college for a random sample of 2,500 students who entered community college within two years of graduation from high school in 1980. By four years after graduation from high school, 24.3 percent of those students had transferred to a four-year college. Factors describing the students' academic performance in community college were the strongest predictors of the eventual transfer in a path analysis design, but family background and high school factors exerted important indirect effects. Although broader access to community colleges may appear to increase educational opportunities for socially and academically disadvantaged students, the fact that more advanced students with better academic preparation in high school actually transfer to four-year colleges suggests that the community college experience may perpetuate, rather than ameliorate, social stratification in higher education.

ERIC Abstract:

This study was conducted to investigate the relative importance of social and academic factors in influencing the probability of transfer from a community college to a four-year college. The structural model used in the study was composed of the following constructs: the effect of social class, race, and gender on students' academically related behaviors in high school; the combined effect of student background and high school behaviors on high school outcomes; the effects of background, high school behaviors, and high school outcomes on community college behaviors; and the effect of background, high school behaviors, high school outcomes, and community college academic behaviors on the probability of transfer from a two-year to a four-year college. Nationally representative data from the "High School and Beyond" study were used to track a random sample of 2,500 students who attended community college within two years of high school graduation in 1980. Within four years after finishing high school, 24.3 percent of the community college students had transferred to a four-year college. The students' academic performance in college was the strongest direct predictor of eventual transfer. Family social class and high school factors (e.g., placement in the academic track, application to college while in high school, high grade point average, and high standardized test scores) exerted important indirect effects on the probability of transfer. Race and gender effects on transfer were found to be weaker than in earlier studies. While broader access to two-year institutions may appear to increase educational opportunities for socially and academically disadvantaged students, the fact that it is the more advanced students with better academic preparation in high school who actually transfer to four-year colleges suggests that the community college experience may actually perpetuate rather than ameliorate social stratification in higher education. Cited from: WJT, ERIC Document #ED315124.

Leslie, L. L. (1984). Changing patterns in student financing of higher education. Journal of Higher Education, 55(3), 313-46.
ERIC Abstract:
The NLS-72 and CIRP files were used to construct profiles of student financing for 1973-94 through 1979-90. Students finance smaller amounts than institutions list. Student self-support is declining while family and scholarship/grant support is rising. The middle-income squeeze and the importance of student aid to private institutions are evident. Cited from: Author/LB, ERIC Document #EJ299882.

Leslie, L. L., and Brinkman, P. T. (1987). Student price response in higher education: The student demand studies. Journal of Higher Education, 58(2), 181-204.
ERIC Abstract:
Results of 25 empirical student demand studies are standardized and analyzed using meta-analytic methods. Results show that higher prices reduce higher education enrollments, and students historically have been more responsive to tuition prices than to (offsetting) student aid. Cited from: Author/MLW, ERIC Document #DJ352734.

Litten, L. H. (1982). Different strokes in the applicant pool: Some refinements in a model of student college choice. Journal of Higher Education, 53(4), 383-402.
PsychInfo Abstract:
Examines previous research on the college selection process and discusses how different types of students vary in their conduct of this process and how they act similarly. The research suggests that parental education has stronger effects on the conduct of the college selection process than such attributes as race or gender. The greatest effect on the selection process involves the way in which pertinent information is obtained. (22 ref).

Malizio, A. G. (1992). Who gets financial aid? And why low-income students don't apply for student aid?: Key findings from the National Postsecondary Student Aid Study. Paper presented at the Annual Meeting of the American Sociological Association, Boston, MA.
ERIC Abstract:
The National Postsecondary Student Aid Study (NPSAS) is a comprehensive study of how students and their families pay for postsecondary education. It includes nationally representative samples of undergraduate, graduate, and first-professional students who attend less-than-2-year institutions, 2-year institutions, 4-year college, and major universities. Students who receive financial aid and those who do not receive aid participate in NPSAS. The National Center for Education Statistics of the U.S. Department of Education conducts the study every 3 years. This paper describes some key findings of the NPSAS:87 and NPSAS:90, and the plans for the NPSAS:93 survey. Specifically, this paper focuses on: (1) source (federal, institution, and state) and type grants, loans, work-study) of financial aid received, by student and institution characteristics; (2) cumulative education debt for undergraduate and graduate education; and (3) reasons why students from families with low income never apply for financial aid. Seven tables and two figures are included. Cited from: Author, ERIC Document #ED362969.

Maxey, J., and Others. (1995). Are Black students less likely to enroll at their first choice college? Journal of Blacks in Higher Education, 7, 100-101.
Data from the 1993-94 ACT Assessment and a follow-up were examined to see how many African-American and White students eventually enrolled in what had been their first-choice colleges. Results for 12,448 African-Americans and 125,298 Whites indicate that initial choices by African-Americans are more liable to change. Cited from: SLD, ERIC Document #EJ507717.

McDonough, P. M. (1994). Buying and selling higher education: The social construction of the college applicant. Journal of Higher Education, 65(4), 427-446.

McDonough, P. M., and Antonio, A. L. (1996). Racial differences in college choice. Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY.

Mortenson, T. G. (1995). Postsecondary Education Opportunity. The Mortenson Report on Public Policy Analysis of Opportunity for Postsecondary Education. Iowa City, IA: Postsecondary Education Opportunity.

Nettles, M. T. (1991). Assessing Progress in Minority Access and Achievement in American Higher Education. ECS Working Papers: State Policy and Assessment in Higher Education. Denver, CO: ECS Distribution Center.
ERIC Abstract:
This paper advances the perspective that more frequent and comprehensive assessments, and more frequent and complete evaluations of college and university programs, are essential if colleges and universities are to improve minority access and achievement. Without denying the need to create new sources of data and information for measuring achievement in higher education, this study relied upon existing sources, many of them under-used. In order to begin assessing the pool of minority college candidates, forecasts of future enrollments and characteristics of prospective students are reviewed including the current growth rate of minority populations and current indicators of various groups' educational preparedness. A discussion of institutional climate (student attitudes, behaviors and experiences and institutional programs, practices and policies) and its contribution to student and institutional outcomes are also discussed with data indicating that these factors consistently play an important role in minority success. A further discussion of the measurement of student outcomes and their use in assessment is included. A conclusion examines the tension between greater access and college and university quality and the place of assessment overall in institutional action to increase minority success in higher education. Included are eight tables and 60 references. Cited from: JB, ERIC Document #ED340289.

Nora, A., and Horvath, F. (1989). Financial assistance: Minority enrollments and persistence. Education and Urban Society, 21(3), 299-311.
ERIC Abstract:
Reviews the literature for empirical evidence of the impact of financial assistance on minority participation and retention in higher education. Recommends further research on minority subgroups in varied institutional settings in diverse geographic areas. Cited from: FMW, ERIC Document #EJ391565.

Olivas, M. A. (1986). Latino College Students. New York: Teachers College Press.

Olivas, M. A. (1979). The Dilemma of Access: Minorities in Two Year Colleges. Washington: Howard University Press.

Ordovensky, J. F. (1995). Effects of institutional attributes on enrollment choice: Implications for postsecondary vocational education. Economics of Education Review, 14(4), 335-50.
Article Abstract:
This paper examines the postsecondary enrollment decision of individual high school graduates with particular focus on the effects of institutional cost and proximity. Using data from the High School and Beyond Survey of 1980 high school seniors, a multinomial logit model of enrollment

probability is estimated. The results are then used to calculate own and cross-alternative elasticities of enrollment probabilities with respect to changes in institutional cost and distance. Both trade school and two-year college vocational programs are explicitly included in the choice set in order to examine how institutional attributes might best be altered in an attempt to increase enrollments in vocational postsecondary training of students who would otherwise have chosen non-enrollment [JEL I21].

ERIC Abstract:
Examines individual high school graduates' postsecondary enrollment decisions, focusing on effects of institutional cost and proximity. Estimates a multinomial logit model of enrollment probability, using data from the 1980 High School and Beyond Survey. Improving vocationally oriented youths' financial accessibility to two-year colleges is more important than improving institutional proximity. (37 references) Cited from: MLH, ERIC Document #EJ517809.

Orfield, G. (1992). Money, equity, and college access. Harvard Educational Review, 62(3), 337-72.
Article Abstract:
In this article, Gary Orfield explores the nature of the relationship between money and access to college, particularly for minority and poor students. Decades after a massive federal government commitment to making a college education available to all, Orfield contends, minority and low-income access is declining, and financial aid is going to middle-class students who could manage without it. Orfield relates to how the goal of making higher education accessible to all got sidetracked as he chronicles the policy debate over student aid through the 1980s and early 1990s. He tells a story of political opportunism, insufficient outreach, bureaucratic insensitivity, and a failure to distinguish cultural differences with regard to borrowing–a story of institutions and faculties protecting themselves through tuition increases without seriously debating social consequences. It is not, however, a story of declining interest in, or aptitude for, college among low-income and minority students. Orfield shows a substantial link between dollars and college attendance, and examines policies that have clearly made things worse for those most in need of assistance–policies that are nevertheless maintained because of political deadlock. He concludes that hard choices must be made if college access is to be restored without greatly increased expenditures, and then he delineates those choices.

ERIC Abstract:
Three decades after massive government commitment to financial aid, minority and low income access is declining and aid going to middle class students. Policies and political deadlock have worsened the situation of those in need, and hard choices must be made if college access is to be restored without greater expenditures. Cited from: SK, ERIC Document # EJ449552.

Orfield, G. (1990). Public policy and college opportunity. American Journal of Education, 98(4), 317-50.
Article Abstract:
As higher education has expanded and become far more important economically, there has been increasing scrutiny of the effect of college policies on full access and equal treatment for women, minorities, and students from lower-income families. College and federal and state officials have been raising costs rapidly while substantially reducing the adequacy of scholarship assistance, and those policies have limited access. Decisions about the structure of public higher-education systems, particularly their reliance on community college to provide wide access, appear to have far-reaching social effects. This article calls for a stronger research agenda explicitly focusing on social effects of policies and considering a broader array of educational approaches.

Orfield, G., and Paul, F. (1988). Declines in minority access: A tale of five cities. Educational Record, 68(4), 56-62.
ERIC Abstract:
A study of enrollment patterns in five major metropolitan areas, that reveals barriers impeding African-American and Hispanic access to two- and four-year institutions, is discussed. Causes of shrinking access include segregation in schools, increasing college costs, inadequate assistance to unprepared students, and lack of commitment to equal opportunity. Cited from: MLW, ERIC Document #EJ372304.

Owings, J., McMillen, M., and Burkett, J. (1995). Making the Cut: Who Meets Selective College Entrance Criteria? Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
ERIC Abstract:
This study used national data to categorize college-bound high school seniors of each of five criteria identified as representative of those required for admission to highly selective colleges. Data came from the National Education Longitudinal Study of 1988 (NELS:88). Selected criteria included grade point average (GPA), the Scholastic Aptitude Test (SAT) scores, courses taken, teachers' perceptions, and participation in extracurricular activities. Demographic and social characteristics of the college-bound seniors who met the highly selective criteria were examined and less restrictive criteria were considered as well. Findings included: (1) more females than males excelled in grades; (2) the percentage of college-bound seniors who achieved GPAs of 3.5 or more and SAT scores of 1100 or more was higher for Asian and White students than for Hispanic, African-American, or American Indian students; (3) seniors from high socio-economic backgrounds were more likely than their contemporaries at other status levels to meet any of the selective criteria; and (4) about one-half of college-bound seniors attending schools identified as "all other private schools" scored 1100 or higher on the SAT while about 20 percent of their peers at public and Catholic schools achieved this level. Attached are four tables and information on the study methodology. Cited from: JB, ERIC Document #ED382121.

Ozden, Y. (1993). The Relative Effects of Test Scores and Ability to Pay on College-Going Behavior. Unpublished doctoral dissertation, University of Wisconsin, Madison.

Paul, F. G. (1990). Access to college in a public policy environment supporting both opportunity and selectivity. American Journal of Education, 98(4), 351-88.
Article Abstract:
During the postwar period, when higher education expanded rapidly, a complex set of public higher education institutions was created in each of our large metropolitan regions, a set that can be considered, together with the private institutions, as an opportunity structure for higher education. This research examines the ways potential college students from five of the nation's largest metropolitan areas have flowed through this opportunity structure. It shows that this system of institutions is highly stratified by mission and admissions policies and offers different opportunities with very different consequences to majority and minority students. It shows that the opportunities available through the public colleges and universities have been most important for all groups of students and that a higher proportion of comprehensive colleges and universities in the public sector, a higher proportion of campuses in the "competitive" and "less competitive" admissions categories (fourth and fifth highest on a six-point scale), and a smaller percentage of community colleges are associated with greater access and bachelor's degree attainment for all students, and particularly for minority students.

Pelavin, S. H., and Kane, M. (1990). Changing the Odds: Factors Increasing Access to College. New York, NY: College Board Publications.

ERIC Abstract:

The study investigated, for both poor and minority students, how demographic characteristics, college aspirations, and high school courses affected college attendance and college completion. The issue of minority college attendance and completion is explored, and previous studies and available data are reviewed. The High School and Beyond database is described, and analysis of data from 15,941 high school sophomores are reported in three chapters, covering: (1) relationship of high school course-taking to college attendance; (2) effect of race/ethnicity and family income on high school course-taking; (3) impact of race/ethnicity, family income, and high school courses on college graduation. Results show significant differences between minority and White and poor and non-poor students in college attendance and completion. Minority students lag slightly behind White students in the percentage aspiring to a bachelor's degree. Results also show that geometry is a particularly strong gatekeeper for minority and poor students, especially for those who aspire to obtain a bachelor's degree. An appendix lists course titles included in the analysis. (Eight references.) Cited from: JDD, ERIC Document #ED326095.

Persell, C. H., Catsambis, S., and Cookson, P. W. (1992). Differential asset conversion: Class and gender pathways to selective colleges. Sociology of Education, 65, 208-25.

Article Abstract:

This article elaborates Bourdieu's theory of cultural capital conversion by specifying a mechanism of differential asset conversion that illuminates the gendered postsecondary educational attainment of women and compares it with that posited for men in status attainment theory. Because young women's economic, cultural, and educational assets generally convert to attendance at postsecondary institutions and selective colleges at lower rates, women need to have more of these assets and to have additional assets to achieve the same attainments as men. Overall, there are major differences in the postsecondary outcomes of students who attend public and elite private boarding schools. Attending an elite private boarding school appears to minimize the gendered pathways to postsecondary institutions and selective colleges that affect public school students.

ERIC Abstract:

Examines through analysis of school attendance figures the differential postsecondary education attainment of men and women. Suggests that as women's economic, cultural, and educational assets convert to lower college attendance rates, they need such assets and more to equal men's educational attainments. Concludes that private boarding school attendance minimizes the gendered pathways to postsecondary education. Cited from: SG, ERIC Document #EJ458381.

Preer, J. L. (198). Minority Access to Higher Education: AAHE-ERIC/Higher Education Research Report 1. Washington, DC: Publications Department, American Association for Higher Education.

ERIC Abstract:

The current status of minority enrollment in higher education and specific concerns that affect students and the institution are examined. Minority enrollment at different institutional levels, in different fields of study, and over different periods of time is examined. Findings reveal a more complex pattern of gains and slowdowns than gross statistics for the last decade indicate. Hispanics and women continue to increase their share of the total enrollment, but African-Americans experience a slackening momentum. The policy framework created by legislation and litigation on issues affecting student access is considered, and the following three related issues are examined: the pool of minority applicants; designing more equitable admission procedures; and

retaining minority students through graduation. Minority groups, especially African-Americans and Hispanics, suffer from inadequate secondary school preparation and counseling and from economic and psychometric barriers. They are disproportionately overrepresented in two-year institutions and underrepresented in four-year colleges and graduate and professional schools. Measures of particular applicability to specific minority group concern must reflect a sensitivity to an institution's own makeup and institutional role. Such measures require an internal system of data gathering to indicate enrollment trends and retention problems; recruitment of faculty and professional staff trained in teaching or counseling poorly prepared students and sensitive to diverse minority group needs; and development of campus services responsive to the linguistic and cultural traditions of minority students. A bibliography is appended. Cited from: SW; ERIC Document #ED207474.

Prindiville, B. A. (1995). Understanding Postsecondary Educational Aspirations: Analysis of NELS:88 Second Follow-up Data. Unpublished doctoral dissertation, University of Wisconsin, Madison.

Richardson, R. C., Jr., and Bender, L. W. (1987). Fostering Minority Access and Achievement in Higher Education: The Role of Urban Community Colleges and Universities. San Francisco, CA: Jossey-Bass, Inc.
ERIC Abstract:
Two overlapping nationwide studies, one funded by the Ford Foundation and the other by the U.S. Department of Education, provide information covering policies, procedures, and practices that enhance or impede the academic success of minority students in universities and community colleges. Topics include understanding the problem of minority underrepresentation in today's higher education; barriers to cooperation between universities and community colleges; the urban community college's role in educating minorities; effecting the transition to urban universities; the states' role in improving minority education; what community college students expect from higher education; how transfer students evaluate their educational experiences; improving transfer programs and practices; assessing the urban educational pipeline; and helping minorities achieve degrees (recommendations for community colleges, universities, and state boards). Appended is a seven-page questionnaire on transferring from a community college to a university. 56 references. Cited from: SM, ERIC Document #ED294468.

Rosenfeld, R. A., and Hearn, J. C. (1982). Sex differences in college choice and financing higher education. In P. Perun (Ed.), The Undergraduate Woman (pp. 127-57). Lexington, MA: Lexington Books.

Schmit, J. L., and Hossler, D. (1995). Where are they now?: A nine year longitudinal study of student college choice. Paper presented at the Annual Meeting of the American Education Research Association, San Francisco, CA.

Seneca, J. J., and Taussig, M. K. (1987). The effects of tuition and financial aid on the enrollment decision at a state university. Research in Higher Education, 26(4), 337-62.
Article Abstract:
Students admitted to more than one institution of higher education face one of the most difficult decisions of their lives. The determinants of these enrollment decisions are crucially important to the yield of qualified students from the number admitted to colleges and universities. This paper specifies an empirical model of the enrollment decision for students admitted both to Rutgers University and to at least one other alternate college. Our estimates of the parameters of the model with a binary choice multiple regression equation show that students base their enrollment decision

on the relative quality of the schools, their own abilities and family resources, and the net costs of the schools. The results are relevant to university tuition and financial aid policies. The general methodology is replicable by other institutions seeking information on the determinants of the enrollment decision.

Sewall, T. J. (1984). A study of adult undergraduates: What causes them to seek a degree? Journal of College Student Personnel, 25(4), 309-14.
PsychInfo Abstract:
Factors influencing degree-seeking by adult students were investigated in questionnaire data for 906 Ss (aged 25-69 yrs) enrolled in 6 campuses. 62 percent were female, 61 percent were married and had dependents, and 66 percent were employed. Major barriers to earlier enrollment cited by Ss were job and family responsibilities and lack of interest. Career-oriented and personal growth goals were most frequently cited as reasons for continuing education. Triggers for enrollment included a realization that the degree was needed to achieve a personal goal and factors related to the specific campus. (11 ref).

Smith, M. H., Beaulieu, L. J., and Seraphine, A. (1995). Social capital, place of residence, and college attendance. Rural Sociology, 60(3), 363-80.
Article Abstract:
The relationship between social interaction and college attendance is examined across varying types of communities. Structural arrangements and interaction patterns that foster positive relationships are regarded as social capital and are conceptualized as investments that can yield human capital returns in terms of higher educational attainment. Logistic regression procedures are employed to analyze data from the High School and Beyond Longitudinal Study. The social capital model of college attendance is estimated for the full sample and separately for high school students living in urban, suburban, and rural communities. Predicted probabilities of attending college for students with high and low social capital are obtained. Results of these analyses indicate that parental expectation of college attendance is the most powerful predictor of subsequent college attendance among variables examined. Measures of community social capital and parental human capital also strongly predict attendance.

ERIC Abstract:
Analysis of High School and Beyond data reveals that suburban students were most likely and rural students were least likely to attend college. Parental expectation of college attendance was the most powerful predictor of subsequent college attendance across residence categories. College attendance for rural students was also predicted by community social capital and parental educational attainment. Cited from: SV, ERIC Document #EJ516767.

Somers, P. A., and St. John, E. P. (1993). Assessing the impact of financial aid offers on enrollment decisions. Journal of Student Financial Aid, 23(3), 7-12.
ERIC Abstract:
A study tested a model for assessing the impact of financial aid offers on 2,558 accepted students' college enrollment decisions. The analysis demonstrates that financial aid strategies have a substantial influence on enrollment and the systematic analysis of student enrollment decisions can help institutional administrators refine their financing decisions. Cited from: Author/MSE, ERIC Document #EJ486584.

Sparks, L. (1993). College Admissions: A Selected, Annotated Bibliography. Bibliographies and Indexes in Education, No. 11. Westport, CT: Greenwood Publishing Group.
ERIC Abstract:
This selective bibliography of approximately 900 items spans works written over several decades, and focuses on all aspects of undergraduate college admissions in the United States. References are included on admission to community colleges, 4-year colleges, and universities. Citations are from the education literature and include books, book chapters, journal articles, dissertations, and ERIC microfiche. The references fall into four categories: general admissions; marketing and recruitment; admissions offices and officers; and foreign admissions. Older materials are included, but popular handbooks on how to get into college are not. The subject index contains cross references to related topics. Cited from: GLR, ERIC Document #ED357676.

St. John, E. P. (1994). Assessing tuition and student aid strategies: Using price-response measures to simulate pricing alternatives. Research in Higher Education, 35(3), 301-34.
Article Abstract:
This paper uses price-response measures derived from recent national studies to assess institutional pricing (tuition and student aid) alternatives in diverse institutional settings. It concludes that such analyses are viable, especially if an understanding of institutional contexts is used to frame and interpret simulation results. The analyses indicate there are limits to the viability of the "Robin Hood" pricing approach that has predominated in private colleges during the past decade. New alternatives, such as simultaneous tuition and grant reductions or the creation of forgivable loans, merit consideration in some settings.

ERIC Abstract:
A study used price-response measures from recent national studies to assess college and university pricing (tuition and student aid) alternatives in diverse institutional settings. It is concluded that such analyses are feasible. Analysis indicated limits to "Robin Hood" pricing patterns are predominant in private colleges. Consideration of new alternatives is urged. Cited from: Author/MSE, ERIC Document #EJ483653.

St. John, E. P. (1991). The impact of student financial aid: A review of recent research. Journal of Student Financial Aid, 21(1), 18-32.
ERIC Abstract:
(NOTE: The following abstract is from a similar paper presented at the Annual Meeting of the Mid South Educational Research Association (New Orleans, LA, November, 1990).
This literature review examines the effectiveness of student financial aid in light of doubts raised about it at the start of the 1980s and subsequent cuts in federal support for student aid as a result of those doubts. The review has three objectives: to determine whether there are reasons to doubt the effectiveness of student aid; to determine whether changes in federal aid policy during the 1980s influenced equal opportunity; and to identify unanswered research questions. The review indicates that student aid is an effective mechanism for promoting equal educational opportunity. However, the erosion in federal grant dollars during the past 15 years may have influenced an erosion in minority access. Based on this review, research questions are identified that merit consideration by institutional and policy researchers. Contains 53 references. Cited from: Author/GLR, ERIC Document #ED334894.

St. John, E. P. (1990). Price response in enrollment decisions: An analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 31(2), 161-76.
Article Abstract:
Most recent research on student price response was conducted on students who entered college before the Pell Grant program was implemented in fall 1973. This study uses the High School and Beyond Sophomore cohort, the High School Class of 1982, to analyze the effects of the amount of tuition charged and aid offered on student enrollment decisions. The findings include (1) all forms of financial aid- grants, work, and loans- were effective in promoting enrollment; (2) one hundred dollars of aid (any type) had a stronger influence on enrollment than a one-hundred-dollar reduction in tuition; (3) low-income students were more responsive to increases in grant aid than to increases in loans or work study; and (4) high-income students were not responsive to changes in aid amounts.

ERIC Abstract:
A study found (1) all forms of financial aid promoted enrollment; (2) $100 of any aid influenced enrollment more than similar tuition reduction; (3) low-income students were more responsive to grant than loan or work-study increases; and (4) high-income students were not responsive to aid changes. Cited from: Author/MSE, ERIC Document #EJ411926.

St. John, E. P. (1993). Untangling the web: Using price-response measures in enrollment projection. Journal of Higher Education, 64(6), 676-95.
ERIC Abstract:
A study analyzed the impact of college tuition and student aid changes in the 1980s on enrollment, using price-response measures to examine why total enrollment remained stable while low-income enrollment declined. The technique is found useful for explaining the consequences of price policy choices. Cited from: MSE, ERIC Document #EJ427870.

St. John, E. P. (1991). What really influences minority attendance? Sequential analysis of the High School and Beyond sophomore cohort. Research in Higher Education, 32(2), 141-58.
Article Abstract:
While the factors that influence college minority student attendance have been the subject of recent study, there remain unresolved questions about how different factors influence college attendance decisions of applicants from historically disadvantaged backgrounds. In particular, there is ambiguity about whether African-Americans are more or less likely to attend than Whites and what factors might improve their attendance rates. This study uses two sets of logistic regression to identify the factors that can promote minority attendance: a set that examines attendance by all high school seniors in the high school class of 1982 and a set that examines attendance by college applicants in this class. Consistent with prior research on student access, three factors are identified that can potentially improve college attendance by minority students: (1) improved academic preparation in elementary and high school; (2) increased aspirations for higher levels of educational attainment; and (3) increased levels of financial aid. Public interventions that would improve any of these factors for minority high school students are likely to improve minority participation rates.

ERIC Abstract:
A study identified factors affecting college attendance by minority students in two groups: all high school seniors in 1982 and the subgroup that applied to college. Consistent with prior research, three factors of potential influence were identified: improved academic preparation; higher educational aspirations; and financial aid. Cited from: Author/MSE, ERIC Document #EJ427415.

St. John, E. P., and Noell, J. (1989). The effects of student financial aid on access to higher education: An analysis of progress with special consideration of minority enrollment. Research in Higher Education, 30(6), 563-81.

Article Abstract:

An objective of the federal student financial aid programs is to promote access to higher education, especially for students from disadvantaged backgrounds. During the past few years, concern has been expressed by diverse segments of the higher education community that this objective is not being met for African-American and Hispanic students. This article analyzes the effects of aid offers on enrollment decisions by college applicants from the classes of 1972, 1980 and 1982, and analyzes the effects the type of aid offered had on enrollment by minority students in the classes is 1980 and 1982. The principal findings from this analysis are that (1) all types of aid packages had a positive impact on enrollment decisions by college applicants in all three classes, and (2) all types of aid had a positive influence on enrollment by minority students.

ERIC Abstract:

The effects of aid offers on enrollment decisions by college applicants from the classes of 1972, 1980 and 1982, and the effects the type of aid had a positive impact on decisions by college applicants including minority students.

St. John, E. P., Oescher, J., and Andrieu, S. (1992). The influence of prices on within-year persistence by traditional college-age students in four-year colleges. Journal of Student Financial Aid, 22(1), 27-38.

Article Abstract:

This paper uses the 1987 National Postsecondary Student Aid Study to examine the influence of prices on within-year persistence by traditional college-age students enrolled in four-year colleges. The findings include: 1) within-year persistence was influenced by the amount of tuition charged; 2) tuition changes were negatively associated with within-year persistence in both public and private colleges, and 3) grant aid was positively associated with persistence in private colleges and negatively associated with persistence in public colleges. The authors conclude that the negative association between grants and persistence by students in public colleges is an artifact, attributable to an insufficient amount of grants available to students in public colleges.

ERIC Abstract:

Analysis of data from the 1987 National Postsecondary Student Aid Study indicated: (1) within-year student persistence was influenced by tuition amount; (2) tuition charges were negatively associated with within-year persistence in both public and private colleges; and (3) grant aid was positively associated with persistence in private colleges but negatively associated with persistence in public colleges. Cited from: Author/DB, ERIC Document #EJ448777.

St. John, E. P., Paulsen, M. B., and Starkey, J. B. (1996). The nexus between college choice and persistence. Research in Higher Education, 37(2), 175-220.

Article Abstract:

Initial student commitments have long been considered an influence on persistence, but the reasons why students choose to attend a college have seldom been considered as dimensions of initial commitments that could influence persistence processes and outcomes. This study used NPSAS-87 to examine the influence of finance-related reasons for choosing a college on persistence decisions. The findings include: (1) finance-related choices have direct and indirect influences on whether students persist in college; and (2) market-based monetary measures of financial aid, tuition costs, housing costs, and other living costs have a substantial direct effect on persistence.

ERIC Abstract:
Using data from the National Postsecondary Student Aid Study, this study examined the influence of finance-related reasons for college choice on persistence decisions. Finance-related choices were found to have direct and indirect influences on college persistence, and market-based, monetary measures of financial aid, tuition, housing costs, and other living costs had substantial direct effects on persistence. Cited from: Author/MSE, ERIC Document #EJ523071.

Stage, F. K., and Hossler, D. (1989). Differences in family influences on college attendance plans for male and female ninth graders. Research in Higher Education, 30(3), 301-15.
Article Abstract:
This study examined a model of college student choice for male and female ninth graders using LISREL. A sample of 703 male students and 718 female students and their parents responded to two sets of questionnaires regarding high school experiences and expectations about college. Endogenous variables examined included parents' expectation regarding higher education for their children, parents' savings for college, students' discussion of college with their parents, and students' aspiration for postsecondary education. The model explained 30.8 percent of the variance in students' aspiration for males and 36.8 percent for females. Final empirical models for the two groups suggested that there may be subtle differences in family influence on male and female students' college-going plans.

ERIC Abstract:
A model of college student choice for male and female ninth graders using LISREL is examined. Variables examined included parents' expectation regarding higher education for their children, parents' savings for college, students' discussion of college with their parents, and students' aspiration for postsecondary education. Cited from: Author/MLW, ERIC Document #EJ396807.

Stage, F. K., and Rushin, P. W. (1993). A combined model of student predisposition to college and persistence in college. Journal of College Student Development, 34(4), 276-82.
ERIC Abstract:
Linked student college choice and college student persistence literatures. Combined model, using variables from college predisposition and college persistence models, was operationalized into one educational process using High School and Beyond data base. Resulting goodness-of-fit measures indicated good fit of the model, as specified, to the data. Cited from: Author/NB, ERIC Document #EJ470114.

Steelman, L. C., and Powell, B. (1993). Doing the right thing: Race and parental locus of responsibility for funding college. Sociology of Education, 66(4), 223-44.
Article Abstract:
Although racial variations in endorsement of social welfare have been studied, the more specific linkage to governmental involvement in higher education has not been established. Using data from High School and Beyond and the National Educational Longitudinal Study-1988, the authors compare the responses of minority versus White parents to questions regarding where parents locate the responsibility for funding college (parent, student, or government), whether they favor specific governmental funding strategies, and whether they have saved for their children's education. Although racial variations are modest, minority parents are not only more receptive to governmental involvement than are White parents, but are more likely to place the financial burden on themselves. These findings suggest that support for governmental aid for higher education transcends pure self-interest and corresponds more closely with a minority-status argument. Once background characteristics are held constant, minority parents make at least as much if not more of

an effort to save as do their White counterparts. Mo t important, these results debunk the myths that minority parents lack responsibility for their offspring, at least with respect to educational investment, and that a group's endorsement of collective welfare is incompatible with its assumption of individual responsibility.

Sociofile Abstract:
Data from the 1980-1986 High School and Beyond survey and from the 1988 National Educational Longitudinal Study are drawn on to analyze racial differences in parental attitudes toward funding their children's college education. The response of minority and White parents to questions regarding funding college education and whether they have saved for the children's education, are compared. Findings indicate that minority parents are more receptive than White parents to governmental involvement in funding collegiate education, and that minority parents are more likely to accept the burden of financing their children's college education than are White parents. The findings debunk the myth that minority parents lack responsibility for their offspring. 7 tables, 53 references. Adapted from the source document. Cited from: Sociological Abstracts, Inc., copyright 1994, all rights reserved.

Thelin, J. R. (1985). Beyond background music: Historical research on admissions and access in higher education. In J. C: Smart (Ed.), Higher Education: Handbook of Theory and Research, Volume I. New York: Agathon Press, Inc.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. Journal of Higher Education, 68(6).

Tinto, V. (1997). Rebuilding colleges as communities: Taking research on student persistence seriously. Review of Higher Education.

Tinto, V. (1996). Learning communities and the reconstruction of the first year of college. Planning for Higher Education, 25(1), 1-7.

Tinto, V. (1994). Leaving College: Rethinking the Causes and Cures of Student Attrition, 2nd ed. Chicago: University of Chicago Press.
ERIC Abstract:
This book provides a synthesis of wide-ranging research on student attrition at American colleges and universities and outlines actions that institutions can and should take to reduce attrition. The key to effective retention is shown to lie in a strong commitment to quality education and the building of a strong sense of inclusive educational and social community on campus. Chapter 1 examines the dimensions and consequences of student departure from institutions of higher education and sets out the goals of the book. Chapter 2 explores the scope and patterning of student departure, looking at the entry and exit of individuals from institutions of higher education and group differences in rates of degree completion. Chapter 3 addresses the roots of individual departure, examining the specific reasons why individuals leave college. Chapter 4 advances a model of individual departure from higher education that sees as the major cause of student attrition the inability of students to make the transition to college and become incorporated into the institution's ongoing social and intellectual life. Chapter 5 explores the dimensions of institutional action, examining the definition of "dropout," the principles of effective retention, and appropriate retention policies for different types of institutions and students. Chapter 6 presents conclusions and directions for further research. Two appendixes examine the assessment of student departure

and propose a model of doctoral student persistence. (Contains approximately 430 references.) Cited from: MDM, ERIC Document #ED371658.

Tinto, V., Russo, P. and Kadel, S. (1994). Constructing educational communities: Increasing retention in challenging circumstances. Community College Journal, 64(4), 26-30.
ERIC Abstract:
Describes Seattle Central Community College's Coordinated Studies Program (CSP)–a thematic, team-taught, and interdisciplinary set of humanities and social science courses taught as a single course. Compares CSP students' outcomes with the academic performance and persistence of other students, revealing the benefits of CSP's peer and teacher support network. Cited from: MAB, ERIC Document #EJ478131.

Tinto, V., Goodsell, A, and Russo, P. (1993). Building community among new college students. Liberal Education, 79(4), 16-21.
ERIC Abstract:
Two collaborative learning programs for beginning college students are examined: the University of Washington's Freshman Interest Group and the Coordinated Studies Program at Seattle Central Community College (Washington). The study looks at whether and how such programs are effective. The programs appear effective in promoting commuter student involvement and achievement. Cited from: MSE, ERIC Document #EJ479696.

Tuttle, R. (1981). A Path Analytical Model of the College Going Decision. Boone, NC: Appalachian State University.

Urahn, S. K. (1989). Student and Parent Attitudes About Financing Education: Effects on Postsecondary Attendance and Choice for Blacks, Whites, and Hispanics. Unpublished doctoral dissertation, University of Minnesota.

Velez, W., and Javalgi, R. G. (1987). Two-year college to four-year college: The likelihood of transfer. American Journal of Education, 96(1), 81-94.
Article Abstract:
Lately, two-year colleges have been the fastest growing sector of higher education. One of their main assignments is to prepare academically oriented students to go on to four-year colleges. This paper reports the findings of an effort to assess the effect of institutional integration, background, academic processes, and psychosocial variables on the transfer probabilities of subsamples of two-year college students. Results indicate that sex, race/ethnicity, high school track, religion, and SES have strong and significant effects on transfer probabilities, and that significant others also exert strong and significant effects. In particular, holding a work-study job and living on campus largely increase the odds of transferring to a four-year college.

ERIC Abstract:
Assesses the effect of institutional integration, background, academic processes, and psychosocial variables on the probability of student transfer from two-year to four-year college. Sex, race/ethnicity, high school track, religion, and socioeconomic status have significant effects on the probability of transfer, as do holding a work-study job and living on campus. Cited from: Author/BJV, ERIC Document # EJ368284.

Weiler, W. C. (1991). The effect of undergraduate student loans on the decision to pursue postbaccalaureate study. Educational Evaluation and Policy Analysis, 13(3), 212-20.
Article Abstract:
Previous research on the demand for graduate study had not focused on the effect of undergraduate indebtedness on individual decisions to pursue a graduate degree. In this article, a modified version of the approach typically used to analyze the transition from high school to college is used to study this effect. Estimates indicate that the level of undergraduate debt is not a significant factor in determining a student's choice of whether to enter the labor market or continue his or her education. However, this result is subject to qualifications related to the way choices facing students had to be specified, given available data.

ERIC Abstract:
The effect of indebtedness (undergraduate loan burden) after graduation on the decision to pursue a graduate degree was studied for 899 individuals from the High School and Beyond study. Level of undergraduate debt was not a significant choice determinant. Some limitations of the methodology are discussed.

Wilson, P. M., and Wilson, J. R. (1992). Environmental influences on adolescent educational aspirations: A logistic transform model. Youth and Society, 24(1), 52-70.
ERIC Abstract:
Determines which factors within the family and school environments influence adolescents' educational aspirations, examining differences among ethnic groups and between males and females using a sample of 2,896 high school seniors from the High School and Beyond Survey of 1985. Findings confirm the significant influence of both environments. Cited from: SLD, ERIC Document #EJ450997.

Wilson, R. (1990). Can Black colleges solve the problem of access for Black students? American Journal of Education, 98(4), 443-57.
Article Abstract:
Historically African-American colleges and universities (HBCUs) have for over 125 years provided higher education access for the overwhelming majority of African-Americans. With the advent of the 1964 Civil Rights Act, the *Adams* desegregation decision, and federal student aid, college enrollment of African-American student dramatically increased; however, the majority (83 percent) of African-American students now attend predominantly White institutions. Although most private HBCUs will remain strong, the increasing desegregation of public HBCUs, and the increasing African-American enrollment in community colleges, places the primary responsibility for African-American educational access on federal and state governments and on majority institutions. In restructuring their mission to meet new realities, HBCUs will have to increasingly stress early outreach, support programs, and transfer programs.

Yang, S. W. (1981). Rural Youths' Decisions to Attend College: Aspirations and Realizations.
Sociofile Abstract:
Examined were the college attendance decisions of rural youths. Specifically analyzed were the effects of peers', teachers', counselors', and parents' influences on college attendance, along with other variables such as students' grades in high school, family socioeconomic status, number of siblings, and students' self-conception of ability in handling college study. Data were from a longitudinal study. The dependent variables were: (1) students' aspirations and plans to attend college, obtained while the Ss were high school seniors; and (2) students' actual college attendance, obtained one year after they graduated from high school. Among others, mothers' expectation was

the most powerful influence on rural youths' college decision and attendance. Cited from: Sociological Abstracts, Inc., copyright 1981, all rights reserved.

Zollinger, R. A. (1984). Financial aid and equity of college choice: The Illinois experience. Journal of Education Finance, 10(1), 121-31.
ERIC Abstract:
Evaluates the success of financial aid programs in increasing college choices for minorities and women of high and low achievement in Illinois. Contrasts the goal of increasing choice with that of broadening access to postsecondary education, and urges that the two objectives be resolved. Cited from: MCG, ERIC Document # EJ313648.

Zox, A. A. (1978). Becoming a non-traditional aged college student: A social-psychological model of entry. Paper presented at the Society for the Study of Social Problems (SSSP).
Sociofile Abstract:
Interview data, from an ongoing study of men thirty-five years and older who were matriculated undergraduates, formed the basis of an additive model of entry to collegiate settings. The sample (N=40) was drawn in a stratified random fashion from lists of such students who were attending six different colleges. This insured variation in terms of key independent variables: age, marital status, time in school, time away from formal classes, and enrollment status–part-time/full-time. A qualitative analysis uncovered that five conditions, experienced in a sequential manner, seem to explain how and why nontraditional aged men become matriculated undergraduates. This involves defining themselves, or their situations, or both, as increasingly frustrating, within a social climate that enables them to develop an awareness of opportunities (or necessities) and capacities for action, while confronting a critical life turning point. They subsequently make reassuring contact with important others, which also serves to counteract personal reservations, and to neutralize nonsupportive contacts. Finally, they must be able to locate schools that are acceptable to them in terms of academic reputation, geographical location, and that retain an agreeable admissions policy. The model suggests hypotheses to be tested which may improve an understanding of the structural and personal factors involved in the process by which men and women enter schools and other institutions as age deviates. Cited from: Sociological Abstracts, Inc., copyright 1978, all rights reserved.

Appendix

National Postsecondary Education Cooperative

Policy Panel on Access

Participants List

September 9, 1997
Washington, DC

Cheryl Blanco, *Chair*
Director, Policy and Information
Western Interstate Commission for Higher Education (WICHE)

Clifford Adelman
Senior Research Analyst
Libraries and Lifelong Learning
U.S. Department of Education

Brenda Albright
Consultant to NPEC

Gary Barnes
Vice President
Program Assessment and Public Service
General Administration
University of North Carolina

Wayne Becraft
Executive Director
AACRAO

Marie Bennett
Director
Education and Institutional Development
ACCSCT

Trudy Bers
Senior Director
Institutional Research, Curriculum and Strategic Planning
Oakton Community College

Dennis Carroll
Program Director
Longitudinal Surveys
NCES

Deborah Carter
Associate Director
Office of Minorities in Higher Education
American Council on Education

Melodie Christal
Director
SHEEO/NCES Communication Network
State Higher Education Executive Officers

Harriet Howell Custer
Vice President of Academic Affairs
Illinois Valley Community College

Eric Dey
Associate Professor
School of Education
University of Michigan

Gwen Dungey
Executive Director
National Association of Student Personnel Administrators

Marlies Dunson
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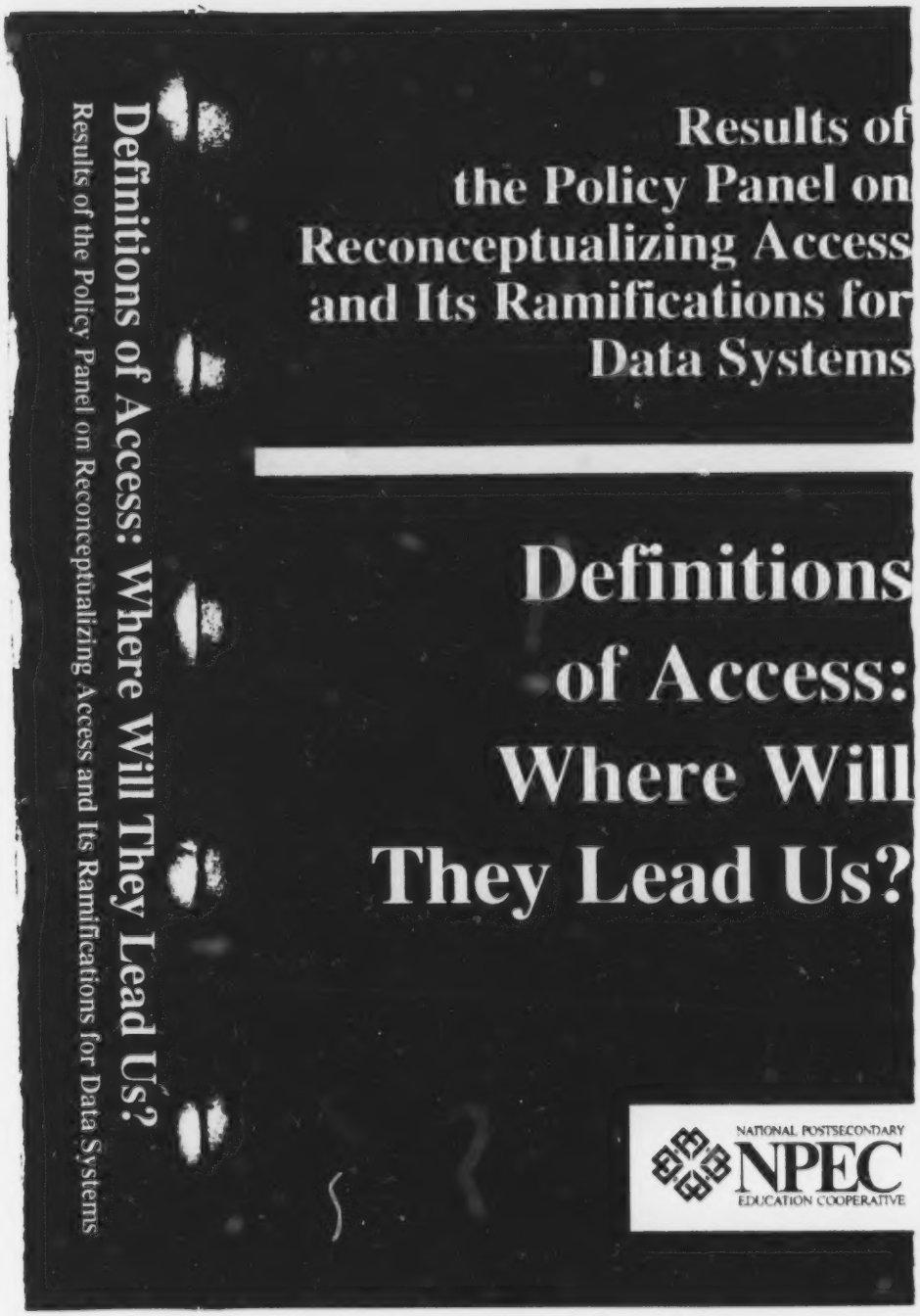
Results of the Policy Panel on Reconceptualizing Access and Its Ramifications for Data Systems
Definitions of Access: Where Will They Lead Us?
NATIONAL POSTSECONDARY
NPEC
EDUCATION COOPERATIVE
Definitions of Access: Where Will They Lead Us?
Results of the Policy Panel on Reconceptualizing Access and Its Ramifications for Data Systems

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The National Postsecondary Education Cooperative (NPEC) is a voluntary partnership of postsecondary institutions, associations, agencies, and organizations. In 1994, Congress authorized the National Center for Education Statistics (NCES) to establish the Cooperative and to support its research and dissemination activities. NPEC's mission is "to identify and communicate ongoing and emerging issues germane to postsecondary education; and to promote the quality, comparability, and utility of postsecondary data and information that support policy development, implementation, and evaluation."

NPEC has produced a highlights video presenting the results of its Policy Panel on Reconceptualizing Access and Its Ramifications for Data Systems held in cooperation with the American Council on Education in September 1997. In the 19-minute video, five leading experts on access policy and research present the implications of broadening the definition of access as it is used in postsecondary education. The video contains excerpts from the presentations, a brief summary of findings from a bibliographic study of research on access, and recommendations for conducting research and developing policy regarding access.

A user's guide accompanies the video and suggests a process by which viewers might apply the information in the video to their individual or organizational goals.

A summary report, *Reconceptualizing Access in Postsecondary Education and Its Ramifications for Data Systems*, highlighting the panel discussions and recommendations and the presentations of the panelists, and including a bibliographic study of research on access, is also available from the NPEC panel.

To order copies of the report, please contact the Education Publications Center (ED Pubs) (1–877–4EDPUBS) or write to the U.S. Department of Education, ED Pubs, P.O. Box 1398, Jessup, MD 20794–1398 or contact the NPEC Project Office (202) 219–1590. The report may be viewed, ordered, or downloaded from the NPEC Web site: nces.ed.gov/npec.

For additional copies of the video and user's guide, please contact the NPEC contractor, Ellen Tenenbaum, at Westat (301–738–3617).

October 1998

Running Time: 19:00

NCES 98–314

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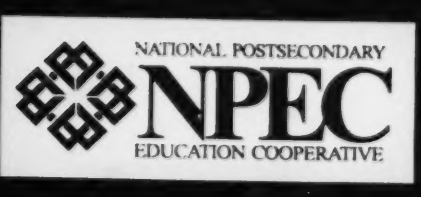
User's Guide

Definitions of Access: Where Will They Lead Us?



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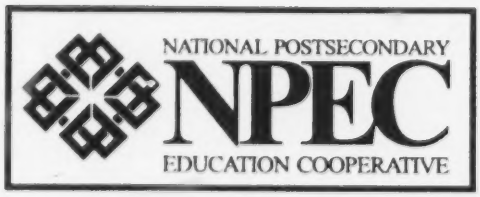
User's Guide

Definitions of Access: Where Will They Lead Us?



User's Guide

Definitions of Access: Where Will They Lead Us?

Purpose of the Guide

This brief guide is designed to complement the video *Definitions of Access: Where Will They Lead Us?* It is written to assist the viewer in using the video as a resource for discussions about the way access is defined, and how different definitions can shape policies that affect the opportunities for postsecondary participation. The video and the guide help the viewer examine both policy and data implications of access definitions.

The video contains highlights of a day-long panel meeting in which 50 individuals discussed the implications of reconceptualizing access. The video is necessarily brief to maintain the interest of a broad audience. It is organized into sections that cover the assumptions behind current definitions, the unrealized potential for access policy, and the data ramifications of access definitions. Watching the video and referring to the organizing questions in this guide, the viewer will be able to engage others in a productive discussion and develop a working list of issues and questions useful in policy-making, program planning, or research activities.

In addition to this video, a summary report of the panel meeting, *Reconceptualizing Access in Postsecondary Education and Its Ramifications for Data Systems*, was produced with copies of the presentations offered by invited resource experts. The summary also contains the data and research recommendations emerging from the panel. The report is available at the following web address: NCES.ed.gov/npec. Limited copies are also available from the Education Publications Center and the project office of the National Postsecondary Education Cooperative (NPEC). Details and phone numbers are found at the end of this guide.

Background to the Policy Panel

On September 9, 1997, five resource experts who have studied and implemented access policies and programs were invited to present their perspectives on access to a policy panel co-sponsored by the National Postsecondary Education Cooperative (NPEC) and the American Council on Education (ACE), Office of Minorities in Higher Education.

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In developing this panel, NPEC and ACE were responding to the changing directions in access policy across the country and the need expressed by researchers and policymakers for the results of significant efforts to support access over many years. The agenda for the panel and the charge to the expert resource panelists reflected the interest by NPEC and ACE in policy goals and public expectations for postsecondary access.

Three key questions were posed to the resource experts as the panel agenda:

1. What does "access" mean?
   Are current common definitions adequate?
2. If access is reconceptualized, what are the new components?
3. What would a different conceptualization of access mean in terms of policy and data collection?

The five resource experts are known for their leadership and research contributions to the existing body of knowledge about domains of access. These domains formed the underlying structure of the discussions about the definition of access:

- Financial Conditions
- Personal Characteristics
- Preparation for Postsecondary Education
- Performance in Postsecondary Education
- Geographic Location of Students and Providers
- Cultural Characteristics

The format of the panel consisted of presentations by the experts and by the authors of a commissioned bibliography of research on access, commentary from a respondent, and small group discussions that led to recommendations about future directions for policy and data collection and analysis.

Participants in the Panel Meeting

The panel moderator was *Cheryl Blanco*, of the Western Interstate Commission for Higher Education (WICHE), NPEC Steering Committee member, and chair of the subcommittee that planned the panel. Five resource experts, education leaders, and researchers presented at the panel meeting.

Zelema Harris, President of Parkland College in Illinois

Arthur Hauptman, an independent consultant and writer about the economics of higher education

Michael Nettles, Professor of Education and Public Policy at the University of Michigan

Laura Rendón, Professor, College of Education at Arizona State University

Vincent Tinto, Distinguished University Professor of Education, Syracuse University

Also participating in the panel discussions were the members of the NPEC Steering Committee, invited guests, consultant *Sandra Ruppert*, and *Sylvia Hurtado* (associate professor) and *Karen Inkelas* (research assistant) from the Center for the Study of Higher and Postsecondary Education at the University of Michigan. Hurtado and Inkelas authored an NPEC-commissioned annotated bibliography of key research on access. *Jacqueline King* of ACE was the panel respondent.

Who Can Use These Materials?

The video and this guide, as well as the summary report of the panel, are useful for a number of different audiences who have worked in the policy field addressing access and have concerns about future directions:

1. Policymakers who are setting state and national policy related to access, evaluating results, and designing initiatives to support access;
2. Institutional administrators planning and implementing early intervention, retention, or other access-related programs;
3. Institutional and organizational administrators and researchers planning new data systems or improvements to current systems;
4. Researchers designing studies and evaluations addressing questions about the impact of access policies and programs; and
5. Students of postsecondary education in their study of major issues affecting the profession.

Suggestions for the Use of Materials

The access panel summary, paper presentations, and the video provide some of the history of access policy in postsecondary education and track many trends that will be helpful to policymakers and researchers. If the video is to be used to stimulate group discussion and decisionmaking, it is recommended that the group and the facilitator spend some time, prior to viewing, building a context for this work.

First, read the summary of the meeting and review the bibliography. Then use the following questions (or tailor them to the needs of the group) to develop a context from which to consider the contributions of the panelists and their recommendations:

1. Review your assumptions about access (members of the group you are facilitating should do the same);
2. Spend some time exploring the origin of your assumptions; that is, are they based in research results, theory, policy, or practice;
3. Consider whether the focus of access policy has changed over time;
4. Document the involvement of the group members in any of those shifts in focus or effort;
5. Contemplate the future direction of access policy; and
6. Determine whether the definition of access is flexible enough to meet the new directions.

Once this discussion has been facilitated and documented, turn your attention to each segment of the videotape or watch it in its entirety. Then:

1. Assess the similarities and differences between your group's assumptions and those of the policy panel;
2. Consider your own definitions of access and decide whether a new definition is needed;
3. Discuss the policy and data implications recommended in the video and in the panel materials and how they will or will not assist you in your own initiatives;
4. Evaluate the data and information about access that you now produce or use in relation to the recommendations from the policy panel and your own group discussions; and
5. Reflect upon necessary changes in your data and information systems as well as other implications from the panel discussions.

Ad Hoc Subcommittee on the Policy Panel

Chair:

Cheryl Blanco
Director
Policy and Information
Western Interstate Commission for Higher Education

Deborah Carter
Associate Director
Office of Minorities in Higher Education
American Council on Education

Melodie Christal
Director
SHEEO/NCES Communication Network
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Warren Fox
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Carol Fuller
Assistant Vice President
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Director
Postsecondary Statistics
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Nancy Schantz
NPEC Project Director
NCES

Robert Wallhaus
Consultant

Copies of the Materials

NPEC will make the video user's guide and the summary report of the panel available on its web site: NCES.ed.gov/npec, where you will also find general information about the Cooperative, its mission, and its activities.

To order single copies of the video, the user's guide, and the summary report, please contact the Education Publications Center (ED Pubs). Call the toll free number (1-877-4EDPUBS) or write to U.S. Department of Education, ED Pubs, P.O. Box 1398, Jessup, MD 20794-1398. For multiple copies, please contact the NPEC project office (202-219-1590) or the Government Printing Office.

Other selected NPEC products include:

Student Outcomes for Policy-Making by Patrick Terenzini

Enhancing the Quality and Use of Student Outcomes Data by Maryann Gray and Judy Diane Grace

Unit Record Versus Aggregate Data: Perspectives on Postsecondary Education Data Collection, Retention, and Release by David Stevens and Michael McGuire

Tracking the Footprints of the Postsecondary Learner: Video, User's Guide, and Report of the NPEC Policy Panel on Technology

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